IMAGINING THE INTANGIBLE

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ABSTRACT

Existing paradigms in corporate law do not adequately conceptualize today's corporations. Corporate assets have become increasingly intangible, and operational structures have been materially altered in the last two decades by information technology. This article argues in favor of "asset sensitive" governance. Asset sensitivity embodies three important additions to prior corporate law scholarship. First, using developmental psychology theory as its starting point, asset sensitive governance focuses on corporate development using a corporation in a social context as the smallest unit of analysis. Second, because corporations rely on intangible assets that are fragile and relational, asset sensitivity mandates shifting fiduciary duties of good faith and care toward developing and preserving corporate assets: ongoing officer and director oversight is needed, not simply oversight of extraordinary transactions. Third, asset sensitive governance considers change across time—in stakeholders, in the economic environment, and in corporate learning.

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I. INTRODUCTION

Walking down the street in 2009, we are surrounded by information technology. Smartphones and digital music players are pressed to the ears of many pedestrians, and laptops are hidden inside briefcases and bookbags. Our lives have been dramatically changed by the digitization of information and the technology revolution of the last twenty years. So too have the lives of corporations.

This article advocates "asset sensitive" governance that is attuned to a business environment driven by information and intangible assets. As many corporations increasingly rely on intangible and information assets for a significant portion of their value, the risks they face have changed. These fragile assets require vigilance in corporate governance and a new way of thinking about corporate assets; existing legal paradigms do not provide an adequate approach.

Asset sensitive governance offers an elaboration on existing models of governance and the corporation through three important additions to prior corporate law scholarship. First, using developmental psychology theory as its starting point, asset sensitive governance requires that the smallest unit of analysis for corporate decision making is the corporation in a particular social context; thus, the corporation is impacted by changes in its human stake-holders[1] and by environmental factors such as technology innovation. Second, asset sensitivity requires strengthening fiduciary duties with a focus on ongoing officer and director oversight across time and omissions, not simply oversight of extraordinary transactions and improper commissions. Third, asset sensitive governance considers change across time, both inside and outside the corporation, and articulates a dialectical mechanism of corporate learning and development.

Specifically, Part II discusses the need for legal scholars to examine the impact of technology on corporate reality, in particular the shift of corporate assets toward information assets and intangibles, as well as the new risks they present for corporations. Mismanagement and neglect of these intangible assets can carry severe consequences for corporate valuation. Corporations today are increasingly "imagined"—a technology-dependent community with permeable corporate borders and fragile intangible assets that are relationally valued. Consequently, corporate law should include a focus in governance discourse on asset preservation and growth.

Part III introduces asset sensitive governance and explains its strengths when layered onto existing legal models of corporate governance. Asset sensitivity dictates refocusing corporate law on the development of the corporation in the long term. It also calls for better protection of corporate assets against mismanagement by officers and directors. Applying theoretical perspectives from developmental psychology instead of solely the traditional corporate law approach of economic theory, Part III presents the corporation as a developing entity that is shaped by multiple layers of developmental context. The current focus of corporate law on minimal default rules and extraordinary transactions is not suited to guiding management of entities heavily dependent on fragile intangible assets. Part III also identifies the deficiencies in corporate law that an asset sensitivity approach highlights: weak fiduciary duties of good faith and care that inadequately address omissions and failures and a weak doctrine of corporate waste. Finally, asset sensitive governance considers change across time—in stakeholders, in the economic environment, and in corporate learning. Part IV concludes.

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[1]For a discussion of stakeholder theory, see generally Thomas W. Dunfee, *Stakeholder Theory: Managing Corporate Social Responsibility in a Multiple Actor Context*, *in* THE OXFORD HANDBOOK OF CORPORATE SOCIAL RESPONSIBILITY 346 (Andrew Crane et al. eds., 2008).

II. THE NEW "IMAGINED" CORPORATION AND ITS INTANGIBLE ASSETS

Corporate law scholars have long considered the role of information transfers and information control in business relationships and corporate governance.[2] What has not been adequately explored in corporate law scholarship is the legal impact of the explosion of information technology reliance and intangible assets on corporate governance.

A. *Imagining the Corporation: Technology Dependency, Intangible Assets, Boundary Permeability, and Loss of Control*

In their 1998 article, Professors Mark Lemley and David McGowan hinted at a key characteristic of today's corporate form—path dependence[3] driven by a company's technology systems.[4] This path dependence and reliance on computer systems has indeed become one of the defining characteristics of today's corporation.[5] Since *Time* magazine named "The Computer" as its person of the year in 1983,[6] corporations' reliance on information systems has increased dramatically, alongside the capabilities of those systems. Information technology in corporate environments was comparatively limited before the 1980s, and the rise of widespread business use of computers partially mirrored the widespread adoption of personal com-

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[2]For example, Ayres and Gertner have argued persuasively that many default rules for contractual relations serve as information-forcing "penalty defaults." *See* Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87, 91 (1989).

[3]When Lemley and McGowan discuss path dependence, they refer to a repeated, self-reinforcing corporate behavior that is not necessarily optimal but simply expedient. *See* Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479, 580 (1998).

[4]"On the cost side, the absence of efficient data reproduction and storage technology such as copiers or computers may simply have prompted . . . a sort of technology-driven path dependence . . . ." *Id.*

[5]As explained succinctly in a recent Wired News blog post:

> [T]he recent recession of western economy has given birth to a whole breed of calculating managers eagerly engaging in a tacit conspiracy with pigheaded IS missionaries. Management control is their belief, outsourcing of IT their sedative, standardization via megalomaniac ERP implementations their preferred tool and continuous improvement their wildest dream. In these organizations, IT has become an instrument of control instead of a permanent motor of innovation.

Beyond the Beyond, ACM Ubiquity—Data and Reality: A Plea for Management Realism and Data Modesty, http://blog.wired.com/sterling/2007/04/acm_ubiquity_da.html (Apr. 15, 2007, 9:26 EST) (quoting Rik Maes, *Data and Reality: A Plea for Management Realism and Data Modesty*, ACM UBIQUITY, 2007, http://www.acm.org/ubiquity/views/v8i13_maes.html).

[6]Otto Friedrich, *Machine of the Year: The Computer Moves In*, TIME, Jan. 3, 1983, at 14.

puting.[7] In 1983, there were only about 2 million personal computers in the United States.[8] By 1990, approximately 54 million personal computers were installed.[9] By 2008, PC shipments reached 80.6 million for the third quarter alone,[10] and nearly every business had implemented a computer system to handle many operations.[11]

Consequently, "information has become the new currency of business,"[12] and corporate assets for most entities have progressively shifted toward intangibles over tangibles.[13] The integration of information technology into corporate operations during the last two decades has encouraged companies to store information in digital format and to centralize sensitive corporate information.[14] Trade secret information,[15] financial information,[16]

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[7]Models produced by companies such as the Dek and Honeywell gained popularity, but their costs and maintenance made them relatively inaccessible to a portion of the business audience. For a discussion of computer history, see generally Hewlett Packard, HP Timeline: 1980s, http://www.hp.com/hpinfo/abouthp/histnfacts/timeline/hist_80s.html (last visited May 20, 2009).

[8]Ken Williams, *Computers, the Myth, the Promise, the Reason*, 10 CREATIVE COMPUTING 239, 239 (1984), *available at* http://www.atarimagazines.com/creative/v10n11/239_Computers_the_myth_the_.php.

[9]CompHist.org, History in the Computing Curriculum, http://www.comphist.org/pdfs/CompHist_9812tla8.pdf (last visited Mar. 9, 2009).

[10]Tony Smith, *Apple Grabs Number Three US PC Market Slot*, CHANNEL REGISTER, July 18, 2008, http://www.channelregister.co.uk/2008/07/18/q2_pc_market/ (indicating that in the second quarter of 2008, there were approximately 71.86 million computers shipped throughout the world); *Gartner Says Worldwide PC Market Grew 15 Percent in Third Quarter of 2008 on Strength of Mini-Notebook Shipments; Industry Feeling the Impact of the Economic Crunch*, GARTNER, Oct. 14, 2008, http://www.gartner.com/it/page.jsp?id=777613 (stating that 80.6 million computers shipped in the third quarter of 2008).

[11]Hubble Smith, *Nevadan at Work: Entrepreneur Rides Technology Wave out of Garage and into Marketplace*, REVIEWJOURNAL.COM, Oct. 22, 2007, http://www.lvrj.com/business/10711546.html.

[12]*Safeguarding the New Currency of Business*, ADVISORY SERVICES—SECURITY (PricewaterhouseCoopers, U.S.), Oct. 2008, at 2, *available at* http://www.pwc.com/extweb/insights.nsf/docid/0E50FD887E3DC70F852574DB005DE509/$File/Safeguarding_the_new_currency.pdf.

[13]Though some companies have always been heavily reliant on intangible assets, these companies faced new challenges occasioned by information technology. For example, although the recording industry has relied on copyrighted material for decades, the challenges of digital files have presented new problems. Accounting practices have struggled to keep up. *See generally*, Denise Caruso, *When Balance Sheets Collide With the New Economy*, N.Y. TIMES, Sept. 9, 2007, at 3.4.

[14]For example, most law firms use document management systems to centralize work product. For a discussion of document management software, see generally Dennis Kennedy & John Gelagin, *Want to Save 16 Minutes Every Day?*, FINDLAW, 2006, http://technology.findlaw.com/articles/00006/009973.html. This use of information technology serves to facilitate knowledge management, the sharing of institutional intellectual resources such as form contracts, and control over access to certain information. *Id.*

[15]For a discussion of the risks that trade secret information faces from technology, see generally Elizabeth A. Rowe, *Saving Trade Secret Disclosures on the Internet Through Sequential Preservation*, 42 WAKE FOREST L. REV. 1 (2007).

business partner information, and customer information have all become centralized in companies' internal computer systems. Further, as the internet became a regular part of consumer economic behaviors, corporate entities began to see commercial opportunities in the wealth of consumer data that could be collected online. Companies also began to place a premium on consumer information databases, changing the way consumer data was valued in corporate acquisitions,[17] and generating secondary streams of revenue through licensing their databases of consumer information.[18] A new economic environment emerged, one of whose defining characteristics has been widespread corporate collection, aggregation, and leveraging of data.[19]

Progressively, these new databases of both corporate proprietary information and consumer information became networked with each other and the outside world.[20] This external accessibility of corporate information through the internet fueled the development of a geographically dispersed workplace structure for many workers. Many workers are now encouraged to work from home to minimize corporate overhead,[21] and, according to some estimates, nearly 75% of the U.S. workforce will be mobile by 2011.[22] Outsourcing of work to geographically distant workers has similarly dramatically increased.[23] As such, the human capital of the corporation is becoming progressively more disconnected from the company's physical

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[16]The Gramm-Leach-Bliley specifically considers the implications of financial information being stored in corporate databases. *See* Andrea M. Matwyshyn, *Material Vulnerabilities: Data Privacy, Corporate Information Security, and Securities Regulation*, 3 BERKELEY BUS. L.J. 129, 157 (2005).

[17]*See* Jane Kaufman Winn & James R. Wrathall, *Who Owns the Customer? The Emerging Law of Commercial Transactions in Electronic Customer Data*, 56 BUS. LAW. 213, 213-14 (2000).

[18]*Id.* at 235-36.

[19]Many consumers now view the purchasing of goods through the internet as a routine part of life. *See* SUSANNAH FOX, TRUST AND PRIVACY ONLINE: WHY AMERICANS WANT TO REWRITE THE RULES 4 (2000), *available at* http://www.pewinternet.org/reports/2000/Trust-and-Privacy-Online.aspx (noting that "48% of internet users has bought something online with a credit card"). In the course of this routine, they leave a trail of information behind them. For a discussion of the consequences of technological adoption and the values embodied therein, see, for example, EVERETT M. ROGERS, DIFFUSION OF INNOVATIONS 405-42 (4th ed. 1995), which discusses the consequences of innovations, examines the value implications of different innovations, and argues that technologies need to be critically evaluated from utilitarian and moral perspectives before being adopted.

[20]*See* ALBERTO-LÁSZLÓ BARABÁSI, LINKED 200-02 (2002).

[21]Harry McGee, *Government Proposal to Encourage Working from Home*, IRISH TIMES (Dublin), Dec. 30, 2008, at 6.

[22]Press Release, IDC, IDC Predicts the Number of Worldwide Mobile Workers to Reach 1 Billion by 2011 (Jan. 15, 2008).

[23]For a discussion of increases in outsourcing and the legal consequences, see, for example, Bijesh Thakker, *Outsourcing to India—Some Considerations and Recommended Practices*, *in* DOING BUSIJESS IN INDIA IN 2009: CRITICAL LEGAL ISSUES FOR U.S. COMPANIES 323 (PLI Corp. Law & Practice, Course Handbook Series No. 18,730, 2009).

offices. Corporate boundaries have become increasingly permeable and increasingly dependent on technology to help define them. This permeability also leads to a lack of control; physically disconnected employees still retain high levels of information access in the corporation through technology. In the past, physically disconnected employees and partners were somewhat limited in the extent of damage they could cause because of this geographic distance, but technological connectedness now negates much of this buffer.[24] Today, a data breach by an employee or business partner holding sensitive corporate information in another country can drive down the value of a company's key intangible assets across all its markets.[25]

Partially as a consequence of this loss of physical control, corporations are becoming interested not only in facilitating access to information for remote workers, but also in regaining some control over physically removed or changing workers. Companies are seeking means of generating institutional knowledge that is physically separated from the minds of those workers. "[It is] an old adage that a firm's most valuable assets walk out the door every night."[26] Stated another way, technology has both exacerbated control problems and has enabled companies to mitigate a portion of this lack of control over human capital: companies are trying to build internal repositories of information—a corporate "brain" of information that survives its workers and allows remote workers to exchange knowledge with each other. As workers change jobs with greater frequency,[27] the transaction costs of training new employees decreases if a digital copy of a portion of a departed employees' corporate know-how has been retained. This disembodiment of information from the employees and its re-embodiment within the corporation happens primarily through "knowledge management" technologies, such as wikis,[28] internal databases, websites, and discussion boards.[29]

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[24]For example, a remote employee of the Dutch East India Company in the 1800s could not easily obtain access to current financial information of the entire company nor to strategic plans. Today, this employee may be physically remote but can retain complete access to a remote corporate network.

[25]*See* Larry Greenemeier, *International Citibank Customers Shaken By Data Breach*, INFORMATIONWEEK, Mar. 8, 2006, http://www.informationweek.com/news/security/cybercrime/showArticle.jhtml?articleID=181502068.

[26]BILL FENSON & SHARON HILL, IMPLEMENTING AND MANAGING TELEWORK: A GUIDE FOR THOSE WHO MAKE IT HAPPEN 1 (2003).

[27]According to longitudinal data from the Bureau of Labor Statistics, younger baby boomers held an average of 10.8 jobs from ages 18 to 42, an increase over past generations. Bureau of Labor Statistics, Frequently Asked Questions, http://www.bls.gov/nls/nlsfaqs.htm (last visited Mar. 9, 2009).

[28]Dan Carlin, *Corporate Wikis Go Viral*, BUS. WK. (ONLINE), Mar. 12, 2007, http://www.businessweek.com/technology/content/mar2007/tc20070312_476504.htm.

[29]This trend toward disembodiment of information from the employees parallels an

Thus, a company's information technology system is simultaneously exacerbating the impact of risk and acting as the nerve center holding a company together and helping it function on a daily basis.[30] These information systems also help companies build a sense of community and common identity, both internally among their employees and externally with their partners and customers. Websites push out a corporate image or message instantaneously to corporate stakeholders all over the world, allowing them to feel connected to the corporation through its technology. Corporations increasingly work to build histories, cultures, and a meaning behind corporate and brand identity for their corporate stakeholders. Using technology tools such as internal wikis and websites, they create modularity in corporate knowledge and culture, enabling a widely dispersed workforce to work collaboratively and still understand the corporate narrative and "artifacts" of logos, mascots, and brands.[31] The reach of the corporate community can include not only officers, directors, shareholders, and employees, but also contractors, business partners, each person or entity whose information is held by the company, customers, beneficiaries of philanthropic acts, and the like.[32] Through leveraging intangible assets such as recognizable

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increased reliance on outsourcing data processing to cut costs. Law scholars argue that employers' and employees' information sharing incentives are not aligned; the contractors who perform outsourced services are operating with even less aligned interests. They are frequently based outside the United States and operate under different legal and ethical business regimes; their incentives and loyalties are different from those of employees within an organization in the United States. Kobayashi and Ribstein argue:

> Employees and employers have competing interests in disclosing and preventing disclosure of information. For example, firms may want to share information with their employees about customers, trade practices and technology that helps the employees do their jobs. This raises the concern that employees will reap private advantage by selling or otherwise transferring this information to third parties during or following their employment. This concern could reduce firms' willingness to share such information with employees, and can suppress incentives to develop information or inventions. . . . At the same time, excessive protection of the employers' information could reduce employees' mobility and the flow of valuable information in society.

Bruce Kobayashi & Larry Ribstein, *Privacy and Firms: Questions Concerning the Extent to Which Privacy Should Be Governed and What the Rules Should Be*, 79 DENV. U. L. REV. 526, 527 (2002) (footnote omitted).

[30]These corporate "brains," naturally, are yet another important corporate intangible asset.

[31]For example, Google's corporate structure is dispersed across several continents. The company relies on virtual conference calls and an extensive internal network of software tools to generate a sense of being "Googly" among its employees. For a discussion of being Googly, see *Are You Googly Enough?*, MATHNEWS, Jan. 18, 2008, http://www.mathnews.uwaterloo.ca/Issues/mn10506/googly.php.

[32]The group of stakeholders impacted by a particular corporate decision or action is inherently malleable, varying across companies, contracts, time, and contexts. In fact, it can be said that the goal of a truly effective brand-building strategy for a company is to generate the largest imagined corporate community possible: a company frequently seeks to enmesh itself in lives of its employees,

trademarks, loyalty program enrollments, and databases of customer information, companies strive to generate a sense of positive association, familiarity, trust, and goodwill.[33] In other words, today's corporation, leveraging the tools of the technology revolution, has become an "imagined" group of dispersed and diverse corporate stakeholders, whose sense of common identity and assets are built significantly through, and tenuously reliant upon, technology.[34]

B. *The Fragility of Intangible Assets and New Corporate Risks*

A corporation's assets are increasingly intangible products built by a group of minds and balance sheets, rather than by hands in real space. Dominant categories of intangible assets include customer relationships and lists, trade secrets, trademarks, copyrights, patents, contract rights, internal research and development, data, and, perhaps most importantly, goodwill.[35] These intangible assets are gaining importance over tangible assets in many corporations. Yet these assets are fundamentally different from tangible assets. Unlike tangible assets, they are more likely to be relational,[36] created by law or human interaction, potentially appreciating, and nonterrestrial. As

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other companies, and consumers, generating emotional connection and repeat purchasing. For a discussion of consumer emotional connection, see *infra* Part III.

[33]For a discussion of goodwill, see *infra* notes 38-41 and accompanying text.

[34]*See* BENEDICT ANDERSON, IMAGINED COMMUNITIES: REFLECTIONS ON THE ORIGIN AND SPREAD OF NATIONALISM 6 (rev. ed. 1991). Anderson further asserts:

> [I]t is imagined as a *community*, because, regardless of the actual inequality and exploitation that may prevail in each, the nation is always conceived as a deep, horizontal comradeship. Ultimately it is this fraternity that makes it possible, over the past two centuries, for so many millions of people, not so much to kill, as willingly to die for such limited imaginings.

Id. at 7. In *Imagined Communities*, Anderson introduces the idea of an "imagined community"—a group where "the members . . . will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion." *Id.* at 6. Anderson argues that this imagined community generates "cultural art[i]facts of a particular kind." *Id.* at 4. Anderson maintains that once created, these cultural artifacts become "modular, capable of being transplanted, with varying degrees of self-consciousness, to a great variety of social terrains, to merge and be merged with a correspondingly wide variety of political and ideological constellations." *Id.* Anderson further asserts that imagined communities build compelling "narrative of identity" and that compelling symbols of that narrative are imperative to the process of collective imagination that generates "emotional legitimacy." *Id.* The construction of this narrative, including channeling voices of the past, is a process Anderson calls "reverse[] ventriloquism." *Id.* at 198.

[35]For a list of intangible asset categories, see ROBERT F. REILLY & ROBERT P. SCHWEIHS, VALUING INTANGIBLE ASSETS 19, 20 (1999).

[36]The definition of "relational" used here is consistent with the use of the term in relational contract theory. For a discussion of relational contract, see generally Ian R. Macneil, *Relational Contract Theory: Challenges and Queries*, 94 NW. U. L. REV. 877 (2000).

a consequence, their risk profiles also differ from those of many tangible assets.

1. Intangible Assets are Relational, Potentially Appreciating, and Nonterrestrial

Unlike tangible assets, intangible assets are relational, meaning that they always depend on a social context to generate value. Value is the emergent outcome of interactions between the company and other persons.[37] Goodwill is perhaps the most dramatic illustration of the relational nature of intangible assets. Although goodwill may sound concrete on first reading, it is anything but concrete. The rationale for goodwill can be traced back to 1888 and the Liverpool Chartered Accountants Students' Association, which framed goodwill as reflecting a benefit from the good feelings and regard that customers entertained toward a business.[38] Today, goodwill is a sometimes negotiated number asserting how much a company is "worth" in excess of its distinct tangible and intangible assets. Specifically, goodwill is frequently calculated as the excess of the purchase price over the fair value of the identifiable tangible and intangible net assets that would be acquired in a business combination.[39] In essence, it is a number valuing corporate je ne sais quoi—it answers the question: "Do people—investors, consumers, market makers—*subjectively think* that this company should be worth more in a transaction than the rest of the balance sheet reflects?"

In other words, goodwill is entirely relational; because of this relational character, sometimes unexpected write-downs for goodwill

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[37]For example, customer relationships cannot be maintained in the way a machine can; they are inherently messy and human, and are frequently built across years of interpersonal exchange. Tradesecrets are created by a court, analyzing in retrospect whether information inside a corporation has been handled with due care since the creation of the alleged trade secret. Patents, copyrights, and trademarks allow for rights to exclude others, granted by law under certain conditions and interpreted by a court. Internal research and development frequently leads to the creation of these rights of exclusion. Contract rights exist in relation to another party and promises of providing goods and services. They are also frequently inalienable without approval of that other party: it is a contracting norm to explicitly prohibit assignment of contract rights and duties in the terms of the contract or require written consent to any such assignment. As this list demonstrates, social embeddedness and human relationships are at the core of the value of these assets.

[38]Marc F. Massoud & Cecily A. Raiborn, *Accounting for Goodwill: Are We Better Off?*, 24 REV. BUS. 26, 26-27 (2003) (citing J.H. Bourne, *Goodwill*, ACCOUNTANT, Sept. 22, 1888, at 604).

[39]FIN. ACCOUNTING STANDARDS BD., STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 141 (2007). Goodwill is valued at the point of a combination, but well-run companies maintain annual or quarterly assessments of estimated goodwill impairment. Also, goodwill write-downs from transactions may not appear until several quarters later. *See* Leslie P. Norton, *Goodwill Hunting: Balance Sheets' Latest Torment*, BARRON'S, Feb. 16, 2009, at 41.

impairment can be in the billions of dollars.[40] Similarly, goodwill may be valued as much, or sometimes more, in a transaction than all other assets together.[41] As any honest investment banker will attest, valuing goodwill is both art and science; it was consistent misvaluing of internet company goodwill that was partially responsible for the dot com bust of 2000.[42] Like a trade secret, goodwill is determined by and created across the lifetime of the entity. It is the value of a set of impressions generated in people's minds about the company's cumulative relational experiences. It is impacted by negative publicity about the company's conduct or its irresponsible management, by perceived untrustworthiness as a business partner, and by other factors that arise out of a company's dealings. Thus, goodwill is the epitome of a relationally constructed asset.

This relational component also explains another key difference of intangible assets. Unlike most corporate tangible assets which depreciate over time,[43] most intangible assets can, instead, gain value the longer they exist. Trademarks, trade secrets, copyrights, patents,[44] customer relationships,[45] contract rights, and goodwill can each increase in value across time.

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[40]*See, e.g.*, Norton, *supra* note 39, at 41 (noting that NYSE acquired the Euronext exchange in 2007 and reported a write-down of $1.59 billion for goodwill impairment in the fourth quarter of 2008).

[41]*See, e.g.*, Robert Barker, *AOL Time Warner's "Goodwill" Games*, BUS. WK. (ONLINE), Jan. 11, 2002, *available at* http://www.businessweek.com/bwdaily/dnflash/jan2002/nf20020111_7455.htm (explaining that in regard to the AOL-Time Warner merger, identifiable assets came up considerably short of the $147 billion total purchase price; therefore, $128 billion was added to AOL Time Warner's balance sheet as "goodwill and other intangible assets").

[42]Heidi N. Moore, *Microsoft-Yahoo Advisers II: The Dot-Com Boom Reunion Tour*, WSJ.COM DEAL JOURNAL, Feb. 4, 2008, http://blogs.wsj.com/deals/2008/02/04/microhoo-brings-together-top-tech-dealmakers/.

[43]Exceptions to the idea that tangible assets depreciate include real property, machines that become worth more for their parts over time than the original cost of the machine, natural resources found on land, and collectible items owned by the corporation such as art. *See* Danny P. Hollingsworth & Walter T. Harrison Jr., *Taxation of Intangibles*, 9 J.L. & COM. 51, 59 (1989) (noting "property that suffers no appreciable loss in usefulness over time . . . is not subject to depreciation").

[44]Copyrights and patents have a finite lifetime under U.S. law, but, nevertheless, it is fair to assert that they can prove to be far more valuable over time during the term of their existence; a copyright or patent may be worth more in year ten than in year one. For example, Mickey Mouse was not particularly valuable when he was first created in 1928 by a relatively unknown animator named Walt Disney and appeared in Gallopin' Gaucho. *See* THE GALLOPIN' GAUCHO (Disney 1928), *available at* http://www.youtube.com/watch?v=5zh43KKl17Y. However, today, the animated character is the flagship image of a company worth over $38 billion by many estimates. *See Disney: Placing an Intrinsic Value on Mickey Mouse*, SEEKING ALPHA, Oct. 29, 2008, http://seekingalpha.com/article/102612-disney-placing-an-intrinsic-value-on-mickey-mouse.

[45]Customer relationships refer to the interpersonal connections that support the flow of business between companies. This is different from a simple customer list. In the tax context, entities frequently argue that they should be allowed to amortize the value of their customer lists. *See, e.g.*, Charles Schwab Corp. v. Comm'r, 122 T.C. 191 (2004).

For example, a customer who reliably buys and trusts a particular product for a period of five years tends to hold an increasingly positive association with a particular brand and trademark. This, in turn, raises the value of the mark and signals increasing corporate goodwill.

Intangible assets are also nonterrestrial. Although some intangible assets may be conceptually connected to a territory, they are not physically rooted in it terrestrially (meaning in real space).[46] For example, a trade secret lives inside the heads (and frequently the laptops) of employees, wherever they go. Components of the trade secret may be stored on the company's servers, which sit in multiple states in the United States and are connected to servers that physically reside in other countries.[47] There is no centralized geographic locus of the asset; it can be transmitted with the click of a mouse.

The relational, potentially appreciating, and nonterrestrial qualities these intangible assets possess make them fundamentally different from tangible assets, which usually exist in real space and were built at a finite point in time by manual labor. Intangible assets, particularly goodwill, must be managed differently because the risk profiles of these assets are fundamentally different. Most importantly, intangible assets are inherently more fragile.

2. Asset Fragility and the Risk Profile of Intangible Assets

As companies' daily operations become more heavily reliant on intangible assets, particularly information assets, they become subject to new categories of risks associated with those assets. A portion of these new risks results from the nature of sensitive digital information itself and risks inherent in technology and the internet. Another portion of these risks, however, are self-inflicted by businesses. Through lack of familiarity with technology, neglect by management, or the unwillingness of management to address existing problems, companies exacerbate information risk.

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[46]Trademarks, for example, can be either state level or federal filings. The rights they grant are, in theory, bounded by the geography of the governing unit granting the mark, i.e., the borders of the state or the country. However, even this notion has been challenged by technology to an extent. The accessibility of the internet across physical borders of these governing units has raised doctrinal questions. *See* Margreth Barrett, *Internet Trademark Suits and the Demise of "Trademark Use,"* 39 U.C. DAVIS L. REV. 371, 395-96 (2006).

[47]Google's proprietary search algorithm provides one example of this nonterrestriality of intangible assets. Google has server farms dispersed throughout the world to improve load times for its searches. *See* T. Surendar, *Google Will Set Up a Server Farm in India*, TIMES OF INDIA (New Delhi), Aug. 11, 2006, *available at* http://timesofindia.indiatimes.com/ articleshow/1882556.cms.

The nature of digital information is such that risk associated with information assets is inherently transitive.[48] This transitivity means that risk follows the information asset itself, and the security of the whole system depends on the lowest common denominator—the security of the least secure trusted party. Companies suffer economic harms and reputational damage as a consequence of not only their own suboptimal security practices, but also because of their business partners' inadequate security practices. Therefore, a company's protection of its information assets is only as good as the information security of its least secure business partner (or a partner's partner).[49] Stated another way, each time a company shares data, it takes a dependency on another company.

The internet also exacerbates risk for companies due to the interconnection it creates. Because a company's internet-mediated databases frequently operate in the context of a highly-centralized corporate technology environment, which may be improperly compartmentalized, a large "attack surface" for information theft is created. Preexisting centralization of computer systems makes attacks on key information assets easier; access into the system at any one of multiple points may provide an attacker an avenue to compromise the target databases. In other words, the ease of sharing databases inadvertently resulted in the ease of attacking them through the internet.[50] Similarly, when a business chooses to rely on a particular technology product in its operations, the flaws of that product become an additional risk for the business.[51]

Much information risk, however, arises from human factors. Omissions in management of information assets, in particular, threaten the

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[48]A security system is only as good as its weakest point. Gary McGraw & John Viega, *The Chain is Only as Strong as its Weakest Link*, IBM DEVELOPER WORKS, Oct. 1, 2000, http://www-106.ibm.com/developerworks/linux/library/s-link.html (last visited July 28, 2009).

[49]If a company shares sensitive corporate information with a business partner and that partner experiences a data leakage, the negative effects to the shared data are similar to those that would have occurred if the original company had been breached itself. *See* Matwyshyn, *supra* note 16, at 170-73 (discussing the principle of transitive closure).

[50]Corporate machines can become compromised and used for sending spam or committing denial of service attacks on others. Companies are also not immune to costs imposed by criminals abusing consumer information. For example, it is estimated by the Federal Trade Commission that U.S. corporations lost approximately $48 billion to identity theft alone between September 2002 and September 2003. Press Release, Fed. Trade Comm'n, FTC Releases Survey of Identity Theft in U.S. 27.3 Million Victims in Past 5 Years, Billions in Losses for Businesses and Consumers (Sept. 3, 2003), *available at* http://www.ftc.gov/opa/2003/09/idtheft.htm.

[51]For example, business use of web-based mail is expected to jump to 20% by 2012. By choosing to rely on web-based e-mail, companies further rely on the internet and outside providers for storage as well as conveyance of their information. Jefferson Graham, *Google Apps Attractive to Small Firms; Search Giant Maneuvers into Microsoft Territory*, USA TODAY, Feb. 13, 2008, at B6.

confidentiality and integrity of corporate assets.[52] Certain corporate assets, such as databases of customer information and preferences, are valuable only because of their confidentiality.[53] For example, corporate proprietary information protected solely by trade secret law could, in effect, lose all its value in an information crime incident because the information's status as a trade secret is entirely contingent upon its confidentiality.[54] The integrity of

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[52]Availability of other corporate assets also becomes limited as a consequence of security issues. An attacker may also usurp availability of a company's technological resources during an attempt to remotely compromise a network. Such resources include, among other things, bandwidth and the work hours allocated to the attack by the people responding to the incident. Incident response employee time does not end when the attack ends; numerous hours are subsequently logged performing forensic examinations, writing incident reports, and fulfilling other recordkeeping obligations. Finally, if a security incident results in a consumer data privacy violation, availability of capital is further diminished because of the subsequent need to cover fines, court costs, attorneys' fees, settlement costs, bureaucratic costs of setting up compliance mechanisms required by consent decrees, settlement agreements, and court decisions. Costs of identity theft to consumers have continued to escalate on a per incident basis. *See Do You Know Where Your Identity Is? Personal Data Theft Eludes Easy Remedies*, KNOWLEDGE@WHARTON, Apr. 20, 2005, http://knowledge.wharton.upenn.edu/article.cfm?articleid=1176.

[53]For example, Acxiom Corporation derives revenue principally from selling aggregated information. *See* Acxiom, http://www.acxiom.com (last visited Mar. 9, 2009). If this information is stolen and becomes available cheaply on the information black market, it is highly unlikely that Acxiom will be able to maintain the value of this intangible asset at previous levels. *See After the Breach: How Secure and Accurate is Consumer Information Held by ChoicePoint and Other Data Aggregators?: Hearing Before the S. Comm. on Banking, Finance, and Insurance*, 109th Cong. 3-4 (2005) (background paper) (stating that approximately 80% of Acxiom's U.S. revenue is derived from managing other companies' data).

[54]It can be argued that any data leakage is demonstrative of inadequate measures to keep the information confidential, thereby putting it outside the scope of trade secret protection of most states' trade secret statutes. Trade secret statutes vary state by state, but most define a "trade secret" as information that an entity has used due care in protecting from disclosure. *See* John T. Soma et al., *Antitrust Pitfalls in Licensing*, *in* 449 INTELLECTUAL PROPERTY ANTITRUST 1996, at 349 (PLI Pat., Copyrights, Trademarks, & Literary Prop. Course Handbook Series No. G4-3968, 1996). If it can be demonstrated that information security practices of an entity were suboptimal during any point in the lifetime of the information, it can frequently be successfully argued that the information in question is no longer a trade secret. *Id.* "One data breach could greatly diminish the value of such an intangible asset." Matwyshyn, *supra* note 16, at 140. For example, the damage that a corporate insider can generate in one episode of information theft has been, in at least one instance, approximated to be between $50 million and $100 million. *See* Bootie Cosgrove-Mather, *Guilty Plea in Huge ID Theft Case*, CBS, Sept. 15, 2004, http://www.cbsnews.com/stories/2004/09/15/tech/main643714.shtml. For example, a help desk worker at Teledata Communications, Inc., which provides credit reports on consumers to lenders, is estimated to have stolen 30,000 consumers' credit reports which he shared with approximately 20 compatriots who leveraged the data to cause significant financial damage to the consumers in question. *Id.* He was paid approximately $30 per credit report, or a total of $900,000. *Id.* To complicate matters, aggregated consumer information held in corporate databases exists in an uncertain legal context: while it is a corporate asset, it is also connected to consumers. As state level data breach notification statutes demonstrate, regardless of whether one believes a consumer property interest exists in collected data, corporate possession of consumer information does not sever its relationship to the individual. State level data breach

corporate systems is also in jeopardy as a consequence of suboptimal security. By some estimates, corporations sustained more than $1.5 trillion in losses in 2000 due to security breaches such as computer viruses.[55] In 2007, the average cost of a data breach rose to $6.3 million from $4.8 million in 2006.[56] Corporate integrity is further affected by a parallel diminution in brand value and corporate goodwill. A company considered to be vulnerable generally suffers bad press and a corresponding decrease in the value of its investments in brand identity building. A brand can become damaged in the minds of business partners and consumers if it is associated with lax information security.[57]

As the losses above demonstrate, intangible assets are inherently more fragile than other types of assets.[58] Omissions in technology management can cause as much harm as commissions, and viral unintended problems harm not only the company but its partners, customers, and the public at large. Yet poor information management is widespread among U.S. corporations.[59] In an annual survey of over 7,000 respondents who comprised chief executive officers, chief financial officers, chief information officers, chief security officers, vice presidents, and directors of information technology and information security from 119 countries, at least three out of ten respondents could not answer basic questions about the information security practices of their organizations.[60] Thirty-five percent did not know the number of security incidents in the last year; 44% did not know what types

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notification statutes require a holder of personally identifiable consumer information who suffers a breach to notify the consumers whose information was impacted. At a minimum, contractual obligations arising out of privacy policies and fair trade practices bind companies' handling of personally identifiable consumer information.

[55] According to a recent survey, over one million computer viruses are currently in circulation, poised to generate even more staggering losses. Jonathan Richards, *Number of Computer Viruses Tops One Million*, TIMESONLINE, Apr. 10, 2008, http://technology.timesonline.co.uk/tol/news/tech_and_web/article3721556.ece. For example, estimates regarding Blaster worm losses alone are approaching $10 million. Federal Bureau of Investigation, U.S. Department of Justice, Operation CyberSweep, http://www.fbi.gov/cyber/cysweep/cysweep1.htm (last visited Nov. 26, 2008).

[56] Thomas Claburn, *The Cost of Data Loss Rises*, INFORMATIONWEEK, Nov. 28, 2007, http://www.informationweek.com/management/showArticle.jhtml?articleID=204204152.

[57] Surveys show that three out of four customers state that they will stop shopping at stores that suffer data breaches. *See* Sharon Gaudin, *Three of Four Say They Will Stop Shopping at Stores that Suffer Data Breaches*, INFORMATIONWEEK, Apr. 12, 2007, http://www.informationweek.com/software/showArticle.jhtml?articleID=199000563&cid=RSSfeed_TechWeb.

[58] Part of the challenge these corporations face exists in building security into a legacy corporate environment unfamiliar with information security principles.

[59] *See* PricewaterhouseCoopers, *The Global State of Information Security*, CIO MAG., Oct. 12, 2008, at 3, *available at* http://www.pwc.com/gx/en/information-security-survey/pdf/pwcsurvey2008_cio_reprint.pdf.

[60] *See id.* at 12.

of security incidents presented the greatest threats to the company's most sensitive information, assets, and operations; 42% could not identify the source of security incidents—whether the attack was most likely to have originated from employees (either current or former), customers, partners or suppliers, hackers, or others.[61] Rampant data breaches of millions of records in 2008 further demonstrate a lack of corporate priority on safe information handling.[62] According to PricewaterhouseCoopers, few companies have a well-rounded view of their compliance activities: "business and IT executives may not have a full picture of compliance lapses. . . . Fewer than half of all respondents say their organization audits and monitors user compliance with security policies (43%)"[63] and "only 44% conduct compliance testing."[64]

Because of the implications of weak information security for the integrity of corporate financial reporting processes in particular, it can be argued that the levels of information security mismanagement among U.S. companies today approach the levels that may trigger a breach of fiduciary duty under the *Caremark/Stone* standard under Delaware law. *In re Caremark International Inc. Derivative Litigation*[65] held that corporate directors' "liability to the corporation for a loss may be said to arise from an *unconsidered failure of the board to act* in circumstances in which due attention would, arguably, have prevented the loss,"[66] if they were guilty of "such an utter failure to attempt to assure a reasonable information and reporting system exists" as would establish a lack of good faith.[67] The Delaware Supreme Court endorsed and elaborated this standard in *Stone v. Ritter*,[68] and recently, a Delaware bankruptcy court has also extended the *Caremark* duty to corporate officers.[69] Thus, in Delaware, directors and officers may be liable in extreme cases for their mere omissions if either they fail to implement a reporting and information system knowing that they

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[61] *Id.* at 6, 12.

[62] *See generally* Privacy Rights Clearinghouse, A Chronology of Data Breaches, http://www.privacyrights.org/ar/ChronDataBreaches.htm (last visited June 11, 2009) (setting forth a list of data breaches).

[63] *Safeguarding the New Currency of Business*, *supra* note 12.

[64] *Id.*

[65] 698 A.2d 959 (Del. Ch. 1996).

[66] *Id.* at 967.

[67] *Id.* at 971.

[68] 911 A.2d 362, 369 (Del. 2006).

[69] Miller v. McDonald (*In re* World Health Alternatives, Inc.), 385 B.R. 576, 590-92 (Bankr. D. Del. 2008).

should have done so, or, having implemented such a system, they consciously failed to monitor or oversee its operations.[70]

Despite the asset and legal risks above, proponents of stronger security frequently face internal resistance to making information security and intangible asset management corporate priorities with suitable investment levels.[71] Therefore, some companies choose weak security, thinking it cost effective to ignore these issues in the short term. In part because of these tensions in risk management planning, certain types of information security mistakes are recurring. The five most common information security errors visible today in corporate information security risk management include the following: a lack of planning overall,[72] nonresponsiveness to external reports of breaches,[73] letting criminals in,[74] theft by rogue employees,[75] and a failure to update existing security.[76] To the extent these failures to manage

[70]Robert T. Miller, *Wrongful Omissions by Corporate Directors:* Stone v. Ritter *and Adapting the Process Model of the Delaware Business Judgment Rule*, 10 U. PA. J. BUS. & EMP. L. 911, 912 (2008). The extent of neglect by directors and officers overseeing corporate information security practices is approaching this point of liability articulated in *Caremark/Stone.* The directors of entities which are subject to the Sarbanes-Oxley Act, Gramm-Leach Bliley Act, Health Insurance Portability and Accountability Act, or the Children's Online Privacy Protection Act, each of which stipulate minimum standards for information security, would be hard-pressed to allege that they were unaware of the importance of information security and preserving the integrity of corporate information. However, companies subject to these statutes are commonly found to have serious information security inadequacies. Similarly, as identity theft reaches its highest rates to date and data breach notifications under relevant state law become more frequent, a director is likely to have read about or received a data breach notification, presumably triggering recognition of the importance of information security for a company.

[71]Richard Fichera & Stephan Wenninger, *Islands of Automation Are Dead—Long Live Islands of Automation*, FORRESTER, Aug. 13, 2004, http://www.forrester.com/Research/Document/Excerpt/0,7211,35206,00.html.

[72]*See* PricewaterhouseCoopers, *supra* note 59, at 3.

[73]For example, in one study of the banking industry in the United States (an industry currently plagued with instability and holding in excess of $7.17 trillion in loans), 36% of customer e-mails went unanswered. *Online Banking Audit Reveals Major Opportunities for Customer Service Improvement*, BUS. WIRE, Feb. 21, 2008, http://findarticles.com/p/articles/mi_m0EIN/is_2008_Feb_21/ai_n24318461/. Ninety-six percent of banks did not offer live chat as a communication channel while 94% of banks did not offer a website with a dynamic, flexible knowledge base allowing customers to have the most updated account information. *Id.*

[74]John Leyden, *Acxiom Database Hacker Jailed for 8 Years*, REGISTER, Feb. 23, 2006, http://www.theregister.co.uk/2006/02/23/acxiom_spam_hack_sentencing/.

[75]*See Ex-AOL Man Jailed for E-mail Scam*, BBC, Aug. 18, 2005, http://news.bbc.co.uk/2/hi/technology/4162320.stm.

[76]For example, TJX Companies recently experienced a large data breach due to a failure to update security. Press Release, Mass. Bankers Ass'n, Massachusetts, Connecticut Bankers Associations and the Maine Association of Community Banks and Individual Banks File Class Action Lawsuit Against TJX Companies Inc., (Apr. 24, 2007), *available at* http://www.qsgi.com/DataBreachSuitNR5.pdf. TJX was not the only business entity that was impacted. Banks who issued the compromised credit card numbers reissued those cards and blamed TJX for these costs. *Id.* Not

constitute more than simply gross negligence but a conscious disregard of management duty, an additional argument could perhaps be crafted that these decisions to ignore security approach the level of a violation of good faith under *In re Walt Disney Co. Derivative Litigation.*[77]

H.L.A. Hart might term this dynamic of conscious or unconscious information security neglect a problem of "internalization":[78] to the degree companies comply with legal rules and best practices regarding information control, they do so in a perfunctory manner. Businesses may, on the one hand, go to extreme lengths to collect and protect proprietary information on a discrete transactional basis through, for example, executing nondisclosure agreements with new employees[79] and initiating trade secret litigation.[80] Meanwhile, on the other hand, businesses frequently ignore day-to-day ongoing information security and intangible asset management concerns. For example, on the occasions when consumers notify corporations about indisputable information security breaches in progress, such warnings sometimes go unheeded by companies.[81]

What accounts for this erratic behavior by corporations with regard to their intangible assets, particularly their information assets? First, as the preceding section indicates, many companies are not aware of the risks of the technologies they have adopted, nor do they realize the fragility of intangible assets.[82] Many do not have adequate processes in place to manage

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surprisingly, TJX became a defendant in several class action suits as a consequence of its data breach. Litigants pursuing TJX for damages included not only consumers, but also a group of banking associations from Massachusetts, Connecticut, and Maine that were comprised of over 300 banks whose customers were implicated in the breach. *Id.* In April 2007, these associations sued TJX and sought to recover the "dramatic costs" that they absorbed to protect their cardholders from identity theft risks resulting from the TJX breach. *Id.* The total cost associated with TJX Companies' data breach has been valued at approximately $4.5 billion. *See* Sharon Gaudin, *Estimates Put T.J. Maxx Security Fiasco at $4.5 Billion*, INFORMATIONWEEK, May 2, 2007, http://www.informationweek.com/news/showArticle.jhtml?articleID=199203277; *see also* Sharon Gaudin, *Banks Hit T.J. Maxx Owner with Class-Action Lawsuit*, INFORMATIONWEEK, Apr. 25, 2007, http://www.informationweek.com/news/showArticle.jhtml?articleID=199201456 (arguing that as corporate data breaches similar to the TJX breach become more frequent and larger in scale, banks cannot continue to absorb the downstream costs of other companies' information security mistakes). As the TJX suits demonstrate, data breaches never occur in a corporate vacuum.

[77]906 A.2d 27, 67 (Del. 2006).

[78]For a discussion of H.L.A. Hart and internalization, see H.L.A. HART, THE CONCEPT OF LAW 99-107 (1961).

[79]For a discussion of nondisclosure agreements, see, for example, Jodi L. Short, *Killing the Messenger: The Use of Nondisclosure Agreements to Silence Whistleblowers*, 60 U. PITT. L. REV. 1207 (1999).

[80]For a discussion of trade secret litigation, see, for example, Elizabeth A. Rowe, *Introducing a Takedown for Trade Secrets on the Internet*, 2007 WIS. L. REV. 1041 (2007).

[81]*See, e.g.*, John Schwartz, *Victoria's Secret Reaches a Data Privacy Settlement*, N.Y. TIMES, Oct. 21, 2003, at C14.

[82]*See supra* Part II.B.2.

technology-related crises, such as a data breach.[83] Second, as will be discussed in the sections that follow, current corporate law does not encourage or require them to correct these deficiencies.[84] Current case law could be understood by some companies to allow them to choose destructive asset management in the pursuit of short-term profit. This is a systemically undesirable reading of case law because of the high levels of technology interdependence in today's economy. When one company chooses to mismanage its assets in the long run, other companies and consumers suffer the negative effects of this decision. Business partners' proprietary information may be placed at risk, and consumers may be placed at increased risk of identity theft.[85] The approach of asset sensitive governance set forth in the next section highlights some of these deficiencies and provides one method of correcting them.

III. ASSET SENSITIVE GOVERNANCE

In 1932, Adolph Berle and E. Merrick Dodd engaged in a debate in the pages of *Harvard Law Review* regarding the function of the corporation in society. Berle argued that "all powers granted to a corporation or to the management of a corporation . . . [are] at all times exercisable only for the ratable benefit of the shareholders,"[86] while Dodd asserted that law should view "the business corporation as an economic institution which has a social service as well as a profit-making function."[87] Berle's opinions have dominated, and maximizing shareholder wealth has been the primary focus of much corporate scholarship. Meanwhile, Dodd's opinions have become embodied in competing stakeholder literature, which argues for concerns of other constituencies to be considered in corporate decisions.[88] But, as Professor Lynn Stout has argued, these two lines of argument may be destined for a merger.[89] This section argues for a theoretical middle ground—that of long run profit maximization through asset sensitive governance. It also

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[83] *See supra* notes 59-64 and accompanying text.

[84] *See infra* Part III.B.1.a.

[85] For a discussion of the interconnectedness of these risks, see generally Matwyshyn, *supra* note 16.

[86] A.A. Berle Jr., *Corporate Powers as Powers in Trust*, 44 HARV. L. REV. 1049, 1049 (1932).

[87] E. Merrick Dodd Jr., *For Whom are Our Corporate Managers Trustees?*, 45 HARV. L. REV. 1145, 1148 (1932).

[88] This stakeholder literature is experiencing a resurgence in the wake of several major corporate crises during the last decade.

[89] Lynn A. Stout, New Thinking on "Shareholder Primacy" 6 (Jan. 10, 2005) (unpublished manuscript), *available at* http://www.law.ucla.edu/docs/bus.sloan-stout.pdf.

argues that risks associated with intangible assets demand strengthening directors' and officers' fiduciary duties of good faith and care, particularly with regard to omissions and failures to manage, as well as invigorating the corporate waste doctrine.

A. *The "Best Interests of the Corporation"*

Much of corporate law scholarship relies on the assumption that the ultimate goal of a business enterprise is to maximize both short-term and long-term profits for shareholders.[90] By doing so, these scholars adopt the perspective of the profit maximizing shareholder.[91] In other words, the inquiry in most corporate law scholarship turns on what the corporation, whose interests are allegedly always identical to those of shareholders in both the short and long term,[92] can do to choose the best available policy or course of action in line with simultaneous short-term and long-term profit maximization. This corporate legal scholarship focused on shareholder profit maximization conceptually holds appeal for many people because of the potency of its framework focused on instrumental value. However, although the framework itself is perhaps persuasive, the argument that shareholder profit maximization in the short term is logically and legally in the "best interests of the corporation" or consistent with long-term profit maximization is not correct.

First, shareholders are not a homogeneous group, and suits arise because shareholders disagree over what their interests dictate, particularly in the short term. Different shareholders even within the same company are

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[90]Perhaps the most famous articulation of the thesis that the exclusive goal of the corporation is shareholder wealth maximization is found in Milton Friedman's canonical *New York Times* article where he argued that shareholder wealth maximization should be pursued by corporations by every means possible short of violating the law. Directors and officers who pursued any other goal only reduce social wealth by increasing "agency costs." *See* Milton Friedman, *A Friedman Doctrine —The Social Responsibility of Business Is to Increase Its Profits*, N.Y. TIMES, Sept. 13, 1970 (Magazine), at 32-33, 122-26.

[91]These scholars craft arguments involving the instrumental value of various corporate actions that frequently use the language of economics. They would undoubtedly dispute this characterization of their arguments. However, in an environment where value is constructed as a consequence of human emotions, as was explained *supra* Part II, an economic calculus in a vacuum devoid of social context has limited utility.

[92]It is a "fixed point of corporate law . . . that shareholders are, and should be, the [only people] whose interests count in corporate decision-making." Roberta Romano, Comment, *What Is the Value of Other Constituency Statutes to Shareholders?*, 43 U. TORONTO L.J. 533, 533 (1993). It is debatable whether the needs of constituencies other than shareholders can be considered in the pursuit of shareholder profit maximization.

driven by different investment priorities.[93] Hedge funds are a very different type of shareholder than a small, individual investor, for example.[94] Shareholders also disagree about what it means to maximize their profits.[95] Similarly, the socially responsible investment movement, which now represents a sizable portion of market activity, demonstrates that moral considerations outweigh the profit motive for some shareholders.[96] They are willing to trade profits for socially responsible corporate conduct, if necessary.[97]

Legislatures and courts have explicitly stated that short-term profit is not the sole appropriate motivator or determinant of corporate behavior. Over forty state legislatures have explicitly addressed the question through corporate constituency statutes, which clarify that it is appropriate or, in some cases, even mandatory for companies to consider constituencies other than shareholders in corporate decisions.[98] Similarly, even business leaders

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[93]For a discussion of shareholder differences, see, for example, Leo L. Clarke & Edward C. Lyons, *The Corporate Common Good: The Right and Obligation of Managers to Do Good to Others*, 32 U. DAYTON L. REV. 275, 276-77, 279-80 (2007); Daniel J.H. Greenwood, *The Dividend Puzzle: Are Shares Entitled to the Residual?*, 32 J. CORP. L. 103, 136-37 (2006); *see also* RAJENDRA S. SISODIA ET AL., FIRMS OF ENDEARMENT 7 (2007) (arguing that most shareholders "enjoy feeling good about companies in which they invest" and institutional investors have grown selective about the moral character of the companies in which they invest).

[94]*See* Thomas W. Briggs, *Corporate Governance and the New Hedge Fund Activism: An Empirical Analysis*, 32 J. CORP. L. 681, 708 (2007) (arguing that politics have entered the world of corporate governance and hedge funds have a greater influence than might be expected).

[95]For example, in *Shlensky v. Wrigley*, Shlensky, a minority shareholder, challenged Philip Wrigley's refusal to install lights in Chicago's Wrigley Field. Shlensky v. Wrigley, 237 N.E.2d 776 (Ill. App. Ct. 1968) (applying Delaware law). The Cubs consistently operated at a loss as a result of low attendance and Shlensky alleged that the low attendance was attributable to Wrigley's refusal to install lights at Wrigley Field. *Id.* at 778. The court refused to review the board's decision and hypothesized that "the long run interest" of the firm "might demand" attention to the impact of night baseball on the neighborhood. *Id.* at 780.

[96]For a discussion of socially responsible investing, see, for example, Thuy-Nga T. Vo, *Rating Management Behavior and Ethics: A Proposal to Upgrade the Corporate Governance Rating Criteria*, 34 J. CORP. L. 1, 9-10, 27 (2008). In 2005, socially responsible investment portfolios constituted $2.3 trillion of the total $24.4 trillion under professional management. *See* SOC. INV. FORUM, 2005 REPORT ON SOCIALLY RESPONSIBLE INVESTING TRENDS IN THE UNITED STATES: 10-YEAR REVIEW, at iv-v (2006) (summarizing the scope and scale of socially responsible investing from 1995 to 2005).

[97]However, socially responsible investing does not necessarily result in a reduction of shareholder profits. *See, e.g.*, Jennie James, *The Calculus of Conscience: Socially-Responsible Investing Can be Both Profitable and Ethical*, TIME EUR., Aug. 14, 2000, *available at* https://www.time.com/time/europe/magazine/2000/0814/ethical.html.

[98]By 2003, constituency statutes had been adopted in forty-one states. Delaware, however, the most influential state in regard to corporate law, has not adopted such a statute. *See* Cheri A. Budzynski, Comment, *Can a Feminist Approach to Corporate Social Responsibility Break Down the Barriers of the Shareholder Primacy Doctrine?*, 38 U. TOL. L. REV. 435, 443 (2006).

have long felt that their duties extend beyond simply maximizing profit for shareholders.[99]

Also, no duty to focus on maximizing short-term profit for the benefit of shareholders exists at common law; at most, courts have asserted a duty not to compromise the potential for future, long-run profits in pursuit of an unrelated, non-corporate goal.[100] In fact, the case held forth as the prime incarnation of the alleged duty to maximize shareholder profits, *Dodge v. Ford Motor Co.*,[101] does not, on close reading, mandate a focus on short-term profit maximization. At issue in Ford was the decision of the company to reduce the price of cars and to refrain from issuing dividends in order "to employ still more men; to spread the benefits of this industrial system to the greatest possible number, to help them build up their lives and their homes . . . [through] putting the greatest share of our profits back into the business."[102] The court states:

> The case presented here is not like any of [the prior cases]. The difference between an incidental humanitarian expenditure of corporate funds for the benefit of the employe[e]s, like the building of a hospital for their use and the employment of agencies for the betterment of their condition, and a general purpose and plan to benefit mankind at the expense of others, is obvious. There should be no confusion (of which there is evidence) of the duties which Mr. Ford conceives that he and the stockholders owe to the general public and the duties which in law he and his codirectors owe to protesting, minority stockholders. A business corporation is organized and carried on primarily for the profit of the stockholders. The powers of the directors are to be employed for that end. The discretion of directors is to be exercised in the choice of means to attain that end, and does not extend to a change in the end itself, to the

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[99]*See* Dodd, *supra* note 87, at 1148, 1153, 1161.

[100]Courts consistently permit directors

> to use corporate funds for charitable purposes; to reject business strategies that would increase profits at the expense of the local community; to avoid risky undertakings that would benefit shareholders at creditors' expense; and to fend off a hostile takeover bid at a premium price in order to protect the interests of employees or the community.

Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 303 (1999) (footnotes omitted).

[101]170 N.W. 668, 683-85 (Mich. 1919).

[102]*Id.* at 671.

> reduction of profits, or to the nondistribution of profits among stockholders in order to devote them to other purposes.[103]

Some scholars have argued that the court's objections articulate a single-minded, exclusive duty to maximize shareholder profits in both the short and long term.[104] Others call the case bad law and suggest that the community of scholars should deem it overruled.[105] But a third possibility exists: the court's objection can be characterized as an objection to the morality-based argument that the good of society required lowering car prices and not issuing dividends—meaning an objection to the complete lack of a corporate interest analysis. The justification offered by Ford in support of its corporate action was the problem and not necessarily the corporate decision itself. Never does the court assert that maximizing shareholder profits in the short term is the corporation's only directive; the court says that (some) shareholder profit is a primary but not an exclusive goal.[106] At most, the court mandates only that corporate decisions by directors be supported by a calculus regarding the instrumental value of the decision from the perspective of the corporation, not from the perspective of society, and that these decisions are likely to generate value at some point in time during the life of the corporation. The court explicitly adopts a long-run perspective and states that "[m]otives of a humanitarian character will not invalidate or form the basis of any relief so long as the acts are within the lawful powers of the board, if believed to be for the permanent welfare of the company."[107]

Had Ford reframed the argument around an instrumental argument that the long-term good and profits of the corporation required the actions

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[103] *Id.* at 684.

[104] *See, e.g.*, Kurt M. Saunders, *The Law and Ethics of Trade Secrets: A Case Study*, 42 CAL. W. L. REV. 209, 235 n.165 (2006) (stating that "[p]rofit maximization also justified the decision in *Dodge v. Ford Motor Co.*, 170 N.W. 668 (Mich. 1919)").

[105] *See* Lynn A. Stout, *Why We Should Stop Teaching* Dodge v. Ford, 3 VA. L. & BUS. REV. 163, 166, 174, 176 (2008).

[106] I agree with the analysis of Professor Einer Elhauge when he states that the "opinion never stated that directors' exclusive duty is to maximize shareholder profits. Rather, it states that profits should be the primary but not exclusive goal of managers, and sustained the manager's expansion decision despite the court's factual conclusion that management based that operational decision largely on humanitarian motives." Einer Elhauge, *Sacrificing Corporate Profits in the Public Interest*, 80 N.Y.U. L. REV. 733, 772-73 (2005). *See generally id.* at 733 (arguing that because large publicly-held corporations insulate dispersed shareholders from social and moral sanctions, they create collective action obstacles to acting on any social or moral impulses; and that the optimization of corporate conduct requires that managers are afforded some operational discretion to sacrifice profits in the public interest even without shareholder approval, subject to various market forces constraining overgenerosity).

[107] *Dodge*, 170 N.W. at 678.

the company took, the court likely would have been more receptive. Ford's decision to lower prices could have been justified in the name of building goodwill and customer relations; in other words, the company was arguably simply moving assets around on its balance sheet with an eye on long-term value creation, not eliminating shareholder profit. Generating improvements in the permanent welfare of the company will always result in profits to shareholders in the (very) long term.

In other words, in perhaps the most oft-cited case for the argument that a corporation is legally bound single-mindedly to maximize short-run shareholder profit, the court actually can be understood to say something completely different. Had the court intended short-term shareholder profit maximization to be the guiding principle of governance, the words "permanent welfare of the company" would have been replaced with "maximization of shareholder profits." The court can be understood to require merely an instrumental articulation of the long-run best interest of the corporation in connection with a challenged corporate action—not mandatory short-term shareholder profit maximization. The court does, however, reject the potency of a purely eleemosynary-based argument from the perspective of social good to justify corporate action.[108] Therefore, long-term corporate profits matter.[109]

Let us assume *arguendo* that an argument regarding the instrumental value of a particular action to the corporation is a correct framing for determining the "best interests of the corporation." The corporate scholarship referenced above still asks the wrong questions: it simply assumes that the interest of short-run and long-run shareholder profit maximization is, by definition, in the best interests of the corporation. But as the discussion of information security corporate culture wars from Part I demonstrates,[110] short-term profit maximization sometimes comes directly at the expense of investments necessary for long-term asset protection. Trade secrets and goodwill, for example, if not protected and maintained, may never be recovered once lost. In such cases, short-term profit maximization is clearly opposed to the long-term profit maximization and the interests of the corporation. A short-term shareholder maximization approach may ignore or undervalue the relational aspects of business, resulting in corporate decisions or omissions that cause asset-wasting consequences, such as regulatory

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[108]*See id.* at 684 ("[I]t is not within the lawful powers of a board of directors to shape and conduct the affairs of a corporation . . . for the primary purpose of benefitting others.").

[109]*See id.* ("It is recognized that pleas must often be made . . . for a continuing as well as an immediately profitable future.").

[110]*See supra* Part I.

infractions, civil judgments, and harm to goodwill and other intangible assets. Because of officer, director, and shareholder turnover, even if preserving assets for the next five years is a priority, preserving assets for the next twenty years may not be. Intangible asset management across time requires vigilant ongoing consideration, rather than a single corporate decision or one-time attempted "fix."

This potential divergence in interest between short-term shareholder profit maximization and long-term profits with prudent corporate asset management demonstrates that the correct crafting of an argument must turn on the long-run interests of the corporation and its shareholders—wholly apart from the short-term interests of any particular group of stakeholders, even shareholders. As a practical matter, a corporation's value is composed, first and foremost, of its assets. Their preservation and expansion in the long term must lie at the core of any definition of the "best interests of the corporation."

The asset sensitivity approach to governance that follows rejects a short-term shareholder profit maximization motive as the prime directive of companies; it is focused on generating strong long-term shareholder profits due to increased corporate wealth. Although the economics literature has been the traditional touchstone for corporate legal scholars, asset sensitive governance is not rooted solely in economic theory. When corporate value creation is dependent on human relationships, as it is with intangible assets, other social science fields should meaningfully inform the discourse. Developmental psychology, in particular, offers paradigms that articulate a mechanism for growth while simultaneously considering emergent environmental and human factors. This is a flexibility that corporate law governance models currently lack. The following sections attempt to buttress existing legal approaches with a focus on the development of the corporation and its assets.

B. *The Asset Sensitivity Approach to Governance*

As discussed in the previous part, corporate statutory and common law leads us to the conclusion that long-term shareholder value is built through assessing the instrumental value of a particular corporate decision to the long-term welfare of the corporation and its shareholders—wholly apart from the short-term interests of its stakeholders. This part introduces an asset sensitivity approach to governance built on that premise. Asset sensitive governance is framed around the following single question: "How can the corporation maximize the current and future value of its assets?"

The three key insights of this governance approach are as follows: first, any calculus of the "best interests of the corporation" must consider the long-term impact of a corporate decision or omission on corporate assets, particularly intangible assets. Second, because of the ways that the value of intangible assets is constructed, the smallest unit of analysis must be the corporation *within a social context.* Divorcing social context from corporate decision making is not possible. Third, considering the corporation at a single point in time alone will likely lead to unintended asset loss across time. Corporate development happens *across time.* Therefore, asset sensitive governance conceptualizes the role of corporate law as protecting the corporation from self-harm across time in order to maximize long-term shareholder value. Officers, directors, and shareholders change across time; the only constant is the corporation itself. Because officers, directors, and shareholders do not necessarily have short-term goals which align with the long-term interests of the corporation, the law can compensate for this divergence by requiring a focus on assets.

Maintaining and growing corporate assets enables the corporation to develop[111] and create long-term profits and value for shareholders. Thus, asset sensitive governance calls for invigorated fiduciary duties of good faith and care to protect and manage corporate assets. It similarly calls for a more potent corporate waste doctrine to prevent the imprudent disposal of assets.

1. Protecting Assets of the Corporation in a Social Context: The Zone of Proximal Corporate Development

Corporate law theory has been dominated by paradigms from law and economics. The discussion tends to center on wealth maximization by self-interested rational actors; maximizing efficiency;[112] concerns over rent-seeking behaviors;[113] and agency costs/opportunism[114] by directors, officers, and shareholders. These law and economic paradigms inadequately capture the fluidity and social dynamics driving corporate behavior today. They also do not articulate a clear mechanism of corporate development.

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[111]For a discussion of corporate self-realization in the economic context of corporate speech, see generally Martin H. Redish & Howard M. Wasserman, *What's Good for General Motors: Corporate Speech and the Theory of Free Expression*, 66 GEO. WASH. L. REV. 235 (1998) (discussing corporate self-realization in the economic context of corporate speech).

[112]*See, e.g.*, STEPHEN M. BAINBRIDGE, CORPORATION LAW AND ECONOMICS 410-21 (2002); FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 37-39 (1991).

[113]*See generally* Blair & Stout, *supra* note 100, at 297 (discussing rent seeking behaviors).

[114]*See generally* Robert B. Thompson & Paul H. Edelman, *Corporate Voting*, 62 VAND. L. REV. 129 (2009) (discussing opportunism and the associated increases in agency costs).

As such, this section introduces a relational approach rooted in insights from developmental psychology. The focus is not on maximizing efficiency and short-term profit, but rather on maximizing a healthy development of the entity, the value of its assets, and shareholder profit in the long term. This section argues that corporate law should reframe its direction: in addition to existing default rules aimed at protecting shareholders, the role of corporate law should be to guide the healthy development of the entity to create long-term value.[115]

At the heart of a corporation's value are its assets. As Part II discussed, entities are become increasingly organized around their information flows, and intangible assets are growing in importance to companies.[116] Yet, as Part II also discussed, current management structures are failing to preserve these corporate assets on a regular basis.[117] The cause for this mismanagement or neglect may arise because managers have inadequately considered the role of social context on the corporation. But the cause may also be a conscious decision not to invest in information security in a misguided attempt to maximize short-term profits, even at the expense of long-term profits.

Developmental psychology offers two important insights about the importance of social context for corporate law and corporate development. The first is the idea that corporate development always occurs in a particular social context that shapes the trajectory of that evolution. The second insight is that development occurs not inside the corporation but at the border of the corporation with society—through its exchanges with its partners, customers, regulators, and others. These insights arise from the work of Lev Vygotsky and Urie Bronfenbrenner in the field of developmental psychology. For Vygotsky and Bronfenbrenner, an individual interacts with and within a particular social context to generate development in an emergent manner.[118] Applying these ideas to the corporate context, the outcome is a socially

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[115]In essence, this model views both law and shareholders as corporate "parents" which shield a growing corporation from malfeasance and neglect of others. Moreover, the law and shareholders help a growing corporation to grow in stable, productive directions that build its tangible and intangible assets. However, unlike human parents, the rewards of stewardship over the corporation for both the state and the shareholders are primarily—though not entirely—pecuniary. The state receives taxes and shareholders receive an increased share price in the long term.

[116]*See supra* notes 44-46 and accompanying text.

[117]*See supra* notes 59-64 and accompanying text.

[118]*See* URIE BRONFENBRENNER, THE ECOLOGY OF HUMAN DEVELOPMENT: EXPERIMENTS BY NATURE AND DESIGN 3-5 (1979) (noting that human development is dependent on interaction at many different levels of social context); L.S. VYGOTSKY, MIND IN SOCIETY: THE DEVELOPMENT OF HIGHER PSYCHOLOGICAL PROCESSES 129-33 (Michael Cole et al. eds., 1978) (recognizing that human development and learning evolves through interactions in varied social settings).

embedded process of corporate growth and development that is sensitive to intangible asset value creation in the long term.

"Lev Vygotsky, the founder of contextualist developmental theory, . . . introduced the importance of analyzing development in a cultural context."[119] For Vygotsky, learning and development occur on the person-society border through an individual interacting inside the "zone of proximal development."[120] The zone of proximal development refers to the gap between the actual developmental level of a child at the time and the higher level of the individual's potential development with help from adults or more advanced peers.[121] Therefore, the smallest unit of analysis for Vygotsky is the individual in a particular social context.[122] By definition, this "person in context" unit of analysis is an inherently variable construction across milieus and people.[123] Help in development comes not only from humans in the environment, but also from self-help using cultural tools such as technology.[124] For Vygotsky, humans master themselves from the outside through interactions with psychological and technical tools, which allow individuals to achieve more in their particular social context.[125] Tools also vary by culture and across social contexts.[126] "Thus, [individuals] are developmentally malleable but only within constraints of biology and environment."[127] In other words, the focus of assessment using a Vygotskian developmental paradigm is less on the static notion of who the person currently is and more on the dynamic question of who the person can become, depending on context and tools—a decidedly long-run perspective.

An elaboration on this idea that evolving contexts shape development can be found in the work of Urie Bronfenbrenner. Bronfenbrenner presents an ecological model that illustrates the importance of reviewing dynamics involved in multiple levels of social context when analyzing development.[128]

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[119] *See* Andrea M. Matwyshyn, *Technology, Commerce, Development, Identity*, 8 MINN. J. L. SCI. & TECH. 515, 535 (2007) (citing LEV VYGOTSKY, THOUGHT AND LANGUAGE (Eugenia Hanfmann & Gertrude Vakar eds. & trans., 1962) (1934).

[120] *See* L.S. VYGOTSKY, THOUGHT AND LANGUAGE 103 (Eugenia Hanfmann & Gertrude Vakar eds. & trans., 1962) (1934).

[121] VYGOTSKY, *supra* note 118, at 86.

[122] *See id.* at 86-89.

[123] *See id.*

[124] *Id.*

[125] *See* VYGOTSKY, *supra* note 118, at 86-89.

[126] *Id.* at 7.

[127] Matwyshyn, *supra* note 119, at 537.

[128] *See generally* BRONFENBRENNER, *supra* note 118. *See also* URIE BRONFENBRENNER, INFLUENCES ON HUMAN DEVELOPMENT (1972) (studying the developing person through the social contexts in which he lives); URIE BRONFENBRENNER, TWO WORLDS OF CHILDHOOD—US AND USSR (1970) (analyzing comparative studies of socialization in the Soviet Union and the United

Specifically, he identifies four levels of analysis: (1) macrosystem, (2) mesosystem, (3) exosystem, and (4) microsystem.[129] Macrosystem level analysis requires examination at the level of culture as a whole, along with belief systems and idealogies underlying cultural rules and norms.[130] In other words, the analysis focuses on the mechanisms of social governance and the worldview prevalent in civil society. Mesosystem level analysis focuses attention on interpersonal dynamics and the dynamics between the individual and secondary settings, such as work.[131] Exosystem level analysis contemplates dynamics in society external to the individual which, nevertheless, affect development across the other layers.[132] On the microsystem level, an individual and her psychological development in a particular context is the primary level of analysis.[133] The individual interacts within and across all four levels and consequently develops in a dialectical manner; each developmental episode builds on previous development.

When applied to corporations, these theoretical lenses encourage us to consider the corporation in a developmental context. No corporation or human exists devoid of a social context; corporations are both highly permeable and always embedded in particular social milieus. Much like a child, a corporation is a developmentally malleable entity, learning and growing within the constraints of its assets and environment. Corporate success and the value of assets, goodwill in particular, is contingent upon those changing environments. The corporation develops as it interacts with its environment.[134] Therefore, it is not possible to simply consider corporate dynamics in a microsystem level vacuum. This border area where corporate development occurs can be termed the "zone of proximal corporate development."

States in a series of expanding social contexts); ROBERT MYERS, THE TWELVE WHO SURVIVE: STRENGTHENING PROGRAMMES OF EARLY CHILDHOOD DEVELOPMENT IN THE THIRD WORLD (1992) (analyzing human development in developing nations through various social contexts).

[129] *See* BRONFENBRENNER, *supra* note 118, at 7-8.

[130] *Id.* at 258.

[131] *Id.* at 209.

[132] *Id.*

[133] BRONFENBRENNER , *supra* note 118, at 7.

[134] For example, as was previously discussed, goodwill is an asset inherently contingent upon a social context and a company's role within that context. Similarly, trademarks are assets that are nonterrestrial, but are tied territorially to a particular market and a particular category of goods within that market. *See supra* Part II.A.1.

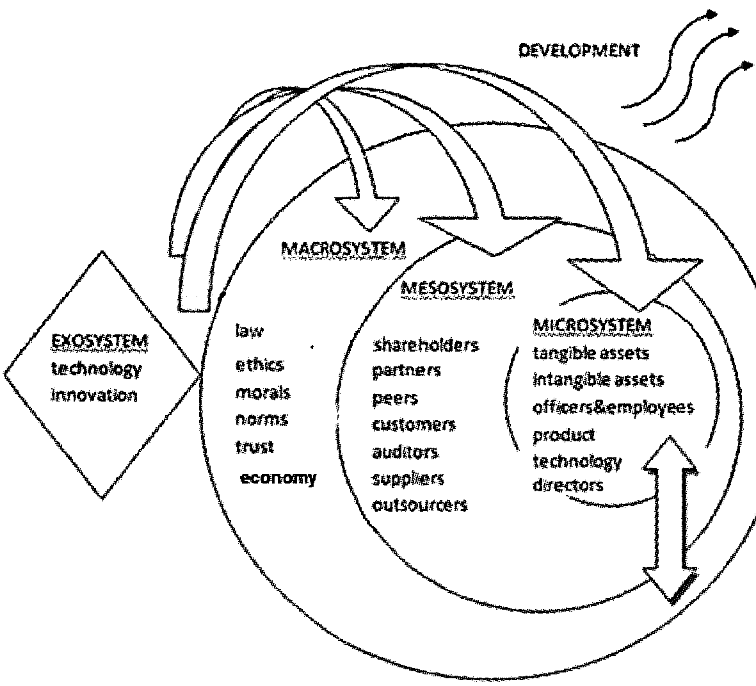

Figure: Corporate Development in Asset Sensitive Governance:
The "Zone of Proximal Corporate Development"

On the microsystem level, different corporations have different assets and internal structures and culture, as determined by management. Officers and directors are a key part of the microsystem level. Unlike shareholders, they, at least in theory, maintain constant involvement in day-to-day corporate process. They are in the strongest position to understand the microsystem level dynamics of the company and most capable of making alterations internally on a relatively quick basis. As a consequence of differences on the microsystem level, companies will interact differently with the world around them on the mesosystem level—peer entities, customers, and their own shareholders. Development occurs at the intersection of these levels. Further, the successful development of each corporation impacts the successful development of others through interactions on the mesosystem level.

The macrosystem level includes various social forces pushing on the company—law, norms, ethics, morality, economy, and commercial trust. Corporate law's macrosystemic purpose becomes clear: it is, at least in part, to guide or "scaffold" corporate development to ensure it heads in a constructive direction in the long term. In other words, corporate law can act as a means to encourage corporations to manage themselves prudently for their own future, which is aligned with the good of the economy as a whole. The technology tools of today's corporations inextricably embed them within this greater ecological context. Good corporate citizenship is key to asset preservation. Societal "bad acts" result in direct harms to corporate assets. Goodwill is diminished through broken relationships, reduction in trust, and negative opinions about the company created through bad publicity.[135] Further, lawsuits and regulatory action are expensive. Capital must be allocated to legal defense, satisfying fines, and paying judgments. Similarly, employee time becomes usurped by producing evidence, testifying, and building internal compliance structures.[136]

The exosystem pushes on all three other levels, allowing for development in new directions, directions not possible without these "cultural tools" of the exosystem. Cultural tools, such as new technologies, facilitate development. They extend the abilities of companies to achieve more than they otherwise would. Computerization and information techology innovation have done precisely that for corporations: they have extended companies' developmental capabilities. But if the impact of tools such as technology on a company is not analyzed and managed, it can act as a negative developmental force.

Legal scholars such as Adolph Berle observed that a "separation of ownership and control" exists inside corporations between officers and directors, on the one hand, and shareholders, on the other.[137] Asset sensitive governance acknowledges that separation. Directors and officers operate on the microsystem level, while shareholders are part of the mesosystem level. Although each exerts pressure on the other, the officers and directors are in closer proximity to corporate assets through their daily interactions. Asset sensitive governance does not, however, accept that the best conceptualization of a corporation is a stagnant snapshot of squabbling stakeholders vying for control; asset sensitive governance conceptualizes the corporation

[135]For example, surveys show that three out of four customers state that they will stop shopping at stores that suffer data breaches. *See* Gaudin, *supra* note 57.

[136]Even if a company deems it to be more cost effective to absorb the diminution in goodwill that might accompany a bad act rather than expend resources to avoid the harm, this cost-benefit calculus is irrelevant. Development in a direction that harms corporate assets is not in line with asset sensitive governance.

[137]*See* ADOLPH A. BERLE, JR. & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY (rev. ed. 1968). Elhauge has argued that as a result of the public's "relative lack of information about how corporate operations may impact the public interest," this separation generates a lack of accountability and emboldens shareholders to demand higher profits without concern for social consequences. Elhauge, *supra* note 106, at 797-98.

as an emergent aggregation of long-term shareholder interests, capable of learning and developing across time, embedded in a particular historical and social context. As asset sensitive governance explains, no person and no entity develops independent of a public context. Further, development is not only contextual, it is cumulative and dialectical. The same company at time one may develop differently than it will at time two because of a previous developmental experience.[138]

2. Protecting Assets of the Corporation Across Time

As Part II argued, each corporation is malleable, impacted by and impacting its community.[139] Management and corporate law must consider broader social dynamics because of the relational contingency of corporate assets.[140] Therefore, as the previous section argued, the proper unit of analysis for corporate law is a corporation in a particular social context.[141] Different prescriptions for the role of corporate law arise when corporate development is conceptualized as occurring at the corporation-society border, particularly across time.

Perhaps the greatest weakness of most models of corporate governance is their temporal stagnancy: they fail to consider and articulate a mechanism for corporate development and learning across time. They essentially assume decision making at various discrete, unconnected points in time. They do not demonstrate the accumulation of corporate knowledge nor do they articulate the impact of the external business, legal, and social environments on the corporate entity across time. In other words, the question for most corporate models simply becomes, assuming all other factors are constant, which stakeholders' interests get included in the calculus in a particular, discrete corporate decision. However, in actuality, all other factors are never constant in corporate decision making. Adding this lens of

[138]As such, asset sensitive governance answers one of the basic questions of corporate law—whether the corporation is a purely private, purely public, or mixed entity—by questioning the premise of the question. This question presumes that it is somehow possible to exist in a vacuum without being impacted by government, society, and the economic environment in fundamental ways. *See* William T. Allen, *Our Schizophrenic Conception of the Business Corporation*, 14 CARDOZO L. REV. 261, 278 (1992).

[139]*See supra* Part II.

[140]Dodd was correct when he acknowledged this social component. *See supra* note 87 and accompanying text.

[141]Positive consequences of corporate development under an asset sensitivity model—what an economist might call positive externalities—include increases in long-term share value, improvements in work conditions to improve human capital investments, and improvements to corporate goodwill, as the corporation's perception as a "good" company in the minds of the public grows.

asset sensitive governance to existing governance paradigms and models of the corporation resolves this temporal stagnancy.

Cumulative corporate learning matters. For example, established companies frequently behave differently than start-up companies in the same industry.[142] Companies that have histories plagued with unpleasant litigation and regulatory prosecution tend to behave differently than those who lack this history.[143] Further, a corporation will function differently across time because of changes in historical context. In this era, companies are influenced heavily by the technology revolution. Just as technology has exacerbated doctrinal tensions in jurisdiction doctrine,[144] digital contracting,[145] and intellectual property law,[146] technology has also impacted corporate governance and corporate law.[147]

As such, corporate law should be expanded to be more than just a set of default rules to protect shareholders in a particular discrete transaction at one point in time. Rather, the focus of corporate law should be across time —a set of rules to protect the corporation from the cumulative effects across time of neglectful, reckless, or malicious managers who ignore, abuse, and waste assets. Thus, the focus must shift away from regulating conduct of corporate directors and officers in extraordinary transactions and shift towards requiring correct practices in ongoing long-term management. In particular, adopting this type of asset sensitivity approach highlights the need

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[142]For example, start-up companies frequently operate on very tight budgets which frequently results in their failure to obtain adequate legal advice in early stage development, particularly with regard to protecting intellectual property. Established entities with deep pockets, on the other hand, are frequently aggressive in early stages of product development with regard to seeking legal advice about maximizing intellectual property protection. A large company might immediately file for trademark protection in ten or more international markets even before a product is released to the public. A start-up is unlikely to have the capital to engage in a preemptive step on this scale.

[143]For a discussion of the impact of a company's history of legal skirmishes, see, for example, Matwyshyn, *supra* note 16, at 182.

[144]For a discussion of how technology has exacerbated existing doctrinal tensions in personal jurisdiction, see, for example, Andrea M. Matwyshyn, *Of Nodes and Power Laws: A Network Theory Approach to Personal Jurisdiction Through Data Privacy*, 98 NW. U. L. REV. 493, 507-09 (2004).

[145]For a discussion of how technology has exacerbated existing doctrinal tensions in contract law, see, for example, Ticketmaster Corp. v. Tickets.com Inc., 2 Fed. App'x. 741 (9th Cir. 2001); ProCD v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996); Specht v. Netscape Commc'ns Corp., 150 F. Supp. 2d 585 (S.D.N.Y. 2001), *aff'd* 306 F.3d 17 (2d Cir. 2002); *see also* Ryan J. Casamiquela, *Contractual Assent and Enforceability in Cyberspace*, 17 BERKELEY TECH. L.J. 475 (2002); Andrea M. Matwyshyn, *Technoconsen(t)sus*, 85 WASH. U. L. REV. 529 (2007) (discussing the legal problems regarding digital rights management technologies).

[146]*See, e.g.*, Matwyshyn, *supra* note 144, at 541-54.

[147]*Id.*

to clarify and expand the scope of officer and director fiduciary duties regarding omissions and the corporate waste doctrine.

As previous sections have explained,[148] the answer to the asset sensitivity question of "How can the corporation maximize the current and future value of its assets?" may run directly contrary to the answer of "How can the corporation maximize short-term profits for shareholders?" However, the answer to the asset sensitivity question generates the answer to the question "How can the corporation maximize value of shareholder holdings and shareholder profits in the long term?"

a. *The Time-Interval Problem of the Business Judgment Rule and Officer and Director Omissions: Duties of Good Faith and Care*

Two changes in fiduciary duties are necessary to require asset sensitivity in governance. First, the focus in the legal analysis of corporate decisions must move from analysis of discrete transactions to analysis of ongoing management. Second, intentional and grossly negligent acts of omission in management must be considered pari passu with intentional and grossly negligent acts of commission.

The lynchpin of corporate law is the imposition of fiduciary duties on directors and officers of a corporation. Directors and officers of corporations[149] have three basic "fiduciary" duties: the duty of care, the duty of loyalty,[150] and the duty of good faith, owed to both the corporation itself and the shareholders.[151] Directors and officers must act in good faith, with the

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[148]*See supra* Part III.B.2.

[149]A distinction currently exists between duties of directors and officers in solvent and financially troubled companies. For a discussion of fiduciary duties of directors in troubled companies, see, for example, Remus D. Valsan & Moin A. Yahya, *Shareholders, Creditors, and Directors' Fiduciary Duties: A Law and Finance Approach*, 2 VA. L. & BUS. REV. 1, 29 (2007) (arguing that the alleged tension between shareholders and creditors is irrelevant for purposes of maximizing a firm's value).

[150]The duty of loyalty requires that directors act on behalf of the corporation and its shareholders and refrain from self-dealing, usurpation of corporate opportunity, and any acts that would permit them to receive an improper personal benefit or injure their constituencies. *See, e.g.*, Guth v. Loft, Inc., 5 A.2d 503, 510 (Del. 1939).

[151]Revlon v. MacAndrews & Forbes Holdings, Inc., 506 A.2d 173, 179 (Del. 1986). Courts have generally held that directors of such corporations do not owe fiduciary duties to other constituencies, such as creditors, whose rights are purely contractual. *See, e.g.*, Katz v. Oak Indus., 508 A.2d 873, 879 (Del. Ch. 1986). Some states have adopted "other constituencies" statutes which permit directors to consider the interests of non-shareholder constituencies, including creditors, in making corporate decisions. In general, however, these statutes are usually permissive and do not appear to create new fiduciary obligations for directors, but merely allow them to consider other

care of a prudent person,[152] and in the best interests of the corporation. They must refrain from self-dealing, usurping corporate opportunities, and receiving improper personal benefits.[153] In addition to the fiduciary duties of directors,[154] officers may have a duty to disclose to the board any fraud or wrongdoing of which they have knowledge, and any situations calling for oversight attention, even where the behavior involved is not dishonest or inequitable.[155] Directors' decisions made on an informed basis, in good faith, and in the honest belief that the action was taken in the best interests of the corporation, will be protected by the "business judgment rule"—the presumption that business decisions are made in such a manner until proven otherwise.[156] The business judgment rule thus provides significant protection to directors from personal liability for their good faith, informed, business decisions.[157] Courts are divided as to whether the business judgment rule is available to officers. Several Delaware decisions have held that

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constituencies as a factor in determining the best interests of the shareholders. Oregon has enacted (permissive) nonshareholder constituency statutes. *See* OR. REV. STAT. § 60.357(5) (2007). *But see* CONN. GEN. STAT. § 33-756 (2000) (requiring consideration of other constituents).

[152]The duty of care, which is governed by statute in most states, usually requires that directors discharge their duties in good faith. Furthermore, directors must discharge their duties with the care that an ordinarily prudent person in a like position would exercise under similar circumstances and in a manner a director reasonably believes to be in the best interests of the corporation. *See, e.g.*, OR. REV. STAT. § 60.357(1). In some states, including Delaware, the standard of care, though essentially the same, is established by judicial decision. *See, e.g.*, Graham v. Allis-Chalmers Mfg. Co., 188 A.2d 125, 130-31 (Del. 1963).

[153]*See Guth*, 5 A.2d at 510.

[154]Although there is not an abundance of law on the subject of the duties and liabilities of corporate officers, most authorities suggest that officers owe the corporation the same fiduciary duties as directors. *See, e.g.*, WILLIAM MEADE FLETCHER, FLETCHER CYCLOPEDIA OF THE LAW OF PRIVATE CORPORATIONS § 846 (2002). The Revised Model Business Corporation Act also states that non-director officers must discharge their duties with the same standards of care as directors. MODEL BUS. CORP. ACT § 8.42 (1984). Under Delaware law "[w]ith respect to the obligation of officers to their own corporation and its stockholders, there is nothing . . . which suggests that the fiduciary duty owed is different in the slightest from that owed by directors." DAVID A. DREXLER ET AL., DELAWARE CORPORATION LAW AND PRACTICE § 14.02, at 14-5 to -6 (2008); *see also* A. Gilchrist Sparks, III & Lawrence A. Hamermesh, *Common Law Duties of Non-Director Corporate Officers*, 48 BUS. LAW. 215, 217 (1992) (arguing that "corporate officers owe [a] corporation the same fiduciary duties as do directors").

[155]*See* Bennett v. Propp, 187 A.2d 405 (Del. 1962).

[156]Aronson v. Lewis, 473 A.2d 805, 812 (Del. 1984). In *Brehm v. Eisner*, 746 A.2d 244, 253 (Del. 2000), the court overruled the portion of *Aronson* suggesting that abuse of discretion was the appropriate standard of review for Rule 23.1 actions (shareholder derivative suits). The basis for the business judgment rule is to encourage calculated business risk-taking without fear of repercussions if the outcome of the decision is not as expected.

[157]The presumption may be rebutted where it is shown that a director had a personal financial interest in a transaction, lacked independence, did not make himself aware of all information that was reasonably available, failed to exercise the requisite level of care, or stood on both sides of the transaction; in these circumstances, the director must show that his conduct met the stricter standard of "entire fairness" to the corporation.

the rule is available to officers,[158] but a Pennsylvania federal court, applying Delaware law,[159] and a California appellate court have stated the opposite.[160] Most recent authority from jurisdictions other than Delaware appears to suggest that the rule is applicable to non-director officers.[161]

As a practical matter, in order to challenge the management of an entity through a derivative suit and assert a breach of fiduciary duty, shareholders, absent a claim of failed oversight, must identity a particular corporate decision they seek to challenge. Courts' review of a board decision under the business judgment rule is not "determined by reference to *the content of the board decision* that leads to a corporate loss . . . [but by] the good faith *or* rationality of the process employed" in making the decision.[162] Provided the decision can be attributed to any rational business purpose and the process appears disinterested and independent, directors are almost never found to have violated their fiduciary duties.[163] Successfully asserting a failure to decide is even more difficult than asserting an improperly made decision. Omissions or failures to proactively manage or discuss a corporate issue rarely provide an adequate basis for asserting a breach of fiduciary duties.[164]

Currently, corporate omissions are inadequately considered in law[165] and, to the extent standards for finding director and officer liability exist,

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[158]*See* Kaplan v. Centex Corp., 284 A.2d 119, 124 (Del. Ch. 1971); *see also* Ella M. Kelly & Wyndhem, Inc. v. Bell, 266 A.2d 878, 879 (Del. 1970).

[159]*See* Platt v. Richardson, No. 88-0144, 1989 WL 159584 (M.D. Pa. June 6, 1989).

[160]*See* Gaillard v. Natomas Co., 256 Cal. Rptr. 702, 711 (Cal. Ct. App. 1989).

[161]*See* Sparks & Hamermesh, *supra* note 154, at 229-30. Some commentators argue that particularly when there is delegation of managerial authority by boards of directors, the business judgment rule "should also apply to officers to whom the board's discretionary authority is delegated, at least where the officer is discharging such authority." *Id.* at 230. In theory, the principle that accountability should reflect actual knowledge and involvement, if applied, can result in a higher level of liability for officers than for directors. Officers may be subject to a higher standard of scrutiny than directors by virtue of their greater accessibility to corporate information and more intimate knowledge of the day-to-day operations of the corporation. *Id.* at 219-20. Officers may be more limited than directors in relying on information and reports from third parties by virtue of their greater first-hand knowledge of the corporation's affairs. *See* Bates v. Dresser, 251 U.S. 524, 530-31 (1920) (imposing personal liability on an officer who was "practically the master of the situation" for fraud which was chargeable to his fault); Masonic Bldg. Corp. v. Carlsen, 253 N.W. 44, 46 (Neb. 1934) (holding that members of an executive committee are bound to critically scan the detailed reports that are given to them which creates a more demanding rule of liability than that of a director not a member of that committee).

[162]*In re* Caremark Int'l Inc. Deriv. Litig., 698 A.2d 959, 967 (Del. Ch. 1996).

[163]*See* Edwin W. Hecker, Jr., *Fiduciary Duties in Business Entities*, 54 U. KAN. L. REV. 975, 984 (2006).

[164]*See id.*

[165]The reason courts have been protective of omissions is the same reason courts have fastidiously avoided discussions into what a director or officer should know—what basic com-

they are exceedingly difficult to prove.[166] As mentioned in Part II,[167] the leading case on the relationship between fiduciary obligations and omissions is the *Caremark* case, as further explained by *Stone*.[168] A very narrow decision, it has not given birth to a line of successful omissions cases.[169] *In re Caremark International Inc. Derivative Litigation* held that corporate directors would be liable for failing to know about wrongdoing by subordinate employees only if they were guilty of "such an utter failure to attempt to assure a reasonable information and reporting system exists [as would] establish the lack of good faith."[170] "[L]iability to the corporation for a loss may be said to arise from an *unconsidered failure of the board to act* in circumstances in which due attention would, arguably, have prevented the loss."[171] In *Stone v. Ritter*, the standard was explained further, holding that directors may be liable for their mere omissions only if either the directors fail to implement a reporting and information system, knowing that they should have done so, or, having implemented such a system, they consciously failed to monitor or oversee its operations.[172] Because knowing wrongdoing is required under *Stone*, negligently made decisions and negligently occurring omissions are treated differently.[173] Negligent omissions require the plaintiff to so show a conscious disregard of duty.[174] This standard is overly protective of mismanagement.

Further, *Brehm v. Eisner (In re Walt Disney Co. Derivative Litigation)*[175] provides another line of argument in favor of stronger fiduciary duties around omissions by management. In *Disney*, the Delaware Supreme

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petence requires on an ongoing basis. Instead of avoiding this discussion, law should embrace it. Turning back again to the case study of information security deficiencies, if an officer or director were to read any major newspaper on a given day, he or she is likely to encounter at least one article about data breaches, poor corporate information handling, or identity theft. Instead of choosing to ignore the issue, as many officers and directors currently do, a reasonable officer or director should consider the issue in the context of his or her own company. If this was done, that officer or director would recognize that the implications of weak data control are potentially severe and that strong data control is fundamental to the preservation of information assets, accuracy, and the integrity of financial reporting. Furthermore, this action would encourage an officer or director to partake in a discussion with internally knowledgeable individuals, such as the general counsel or other corporate decision makers.

[166]Miller, *supra* note 70, at 912 (discussing corporate director liability to shareholders for the failure to take action).

[167]*See supra* Part II.B.2.

[168]Stone v. Ritter, 911 A.2d 362 (Del. 2006).

[169]Miller, *supra* note 70, at 912.

[170]*In re* Caremark Int'l Inc. Deriv. Litig., 698 A.2d 959, 971 (Del. Ch. 1996).

[171]*Id.* at 967.

[172]911 A.2d 362, 362 (Del. 2006).

[173]*See id.*; Miller, *supra* note 70, at 913.

[174]*See Stone*, 911 A.2d at 362; Miller, *supra* note 70, at 912-13.

[175]906 A.2d 27 (Del. 2006).

Court confirmed that the duty of good faith involves concerns distinct from the duty of care: "conduct motivated by an actual intent to do harm [is a] . . . quintessential"[176] breach of the duty of good faith but "action taken solely by reason of gross negligence and without any malevolent intent" is not a breach of the duty of good faith.[177] Nonetheless, "issues of good faith are (to a certain degree) inseparably and necessarily intertwined with the duties of care and loyalty," and a conscious disregard of directorial duties is an act of bad faith,[178] not just a breach of the duty of care;[179] and the duty of good faith is intended to capture misconduct that the duty of care does not. A breach of the duty of good faith does not involve a conflicting self-interest like the duty of loyalty, but rather involves acts "qualitatively more culpable" than gross negligence.[180] This standard too, as currently interpreted, is overly protective of mismanagement of intangible assets. However, both these standards can and should evolve to address management omissions.

As information assets dominate the business landscape, their transactions and management are increasingly spread across long stretches of time, not one-shot deal agreements and transfers.[181] As previously explained[182] through the example of corporate intangible asset management and information security, corporate inaction can harm today's corporation as much as incorrect corporate action. Yet a failure to protect assets that leads to their destruction is difficult, if not impossible, to challenge as a breach of fiduciary duty under today's corporate law standards. Frequently, no board decision can be identified by shareholders for the challenge; it may be the absence of a decision that causes the loss of assets. This distinction between acts of commission and acts of omission in corporate law is particularly unsustainable in an economy with companies heavily reliant on intangible assets. Only a long-term management process focus that considers all sources of possible harm to assets—both acts of commission and acts of omission—is compatible with a healthy developmental trajectory for entities dominated by information assets. Therefore, fiduciary duties need to be similarly structured, focused both on acts of commission and acts of omission that lead to corporate self-harm. Phrased another way, corporate law

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[176] *Id.* at 64.

[177] *Id.*

[178] *Id.* at 65 (internal quotation omitted).

[179] Thus, such conduct is outside the scope of protection offered by section 102(b)(7) and, potentially, section 145. *See* DEL. CODE ANN. tit. 8, §§ 102(b)(7), 145 (2001).

[180] *In re Walt Disney*, 906 A.2d at 66.

[181] Licenses to share information, for example, usually involve an ongoing data sharing arrangement over the course of months or years.

[182] *See supra* Part II.B.2.

suffers from a time-interval problem[183] in crafting fiduciary duties—though the corporation may look healthy at a given point in time, cumulative negative consequences can emerge across time.

Instead of turning to corporate law as a source for optional default rules, we can look to corporate law to encourage responsible officer and director decision making for the good of long-term corporate development. Although the traditional perception of the role of corporate law was simply to stay out of the way of market transactions and not to hinder risk taking by corporate managers,[184] this approach can no longer be sustained in an environment with fragile intangible assets. Managers with a desire for imprudent risk that leads to substantial corporate asset damage should be kept in check from harming the corporation. In this way, the law can provide legal scaffolding toward a positive corporate developmental direction. Failing to discuss and decide an important corporate matter regarding long-term asset management strategy, i.e., having no corporate process, should correctly be assessed as a disregard of duties or, at best, deemed more akin to a failed decision-making process in a discrete transaction, rather than to a successful one.

As such, the duty of good faith as explained in *Disney* should be construed to require asset sensitive governance. Anything less than asset sensitive governance constitutes a failure to manage in the best interests of the corporation—consciously or grossly negligently prioritizing short-term interests over long-term corporate welfare. Particularly since it is designed to capture misconduct the duty of care does not, it may present the most promising doctrinal hook for expanding obligations of officers and directors to include an affirmative obligation of asset sensitive governance and liability for serious omissions in management. Further, the duty of care as explained in *Caremark* can also be expanded to include poor asset management as a category of officer and director failure to oversee adequate audit and reporting systems.

These doctrinal expansions arising out of an asset sensitive approach to corporate governance would also better harmonize the responsibilities of directors and officers during regular business operations with those of directors and officers in financially distressed companies. A heightened duty to manage assets effectively and strengthened fiduciary duties currently exist

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[183]Time interval problems involve varied results based on the period of the data sampling. Here, looking at only one snapshot of the corporation, no problems in asset management may be visible. However, when the corporation is viewed across long periods of time, emergent effects of neglect in asset management manifest consequences.

[184]Miller, *supra* note 70, at 913.

when a company enters financial distress. Recently, in *Bridgeport Holdings Inc. Liquidating Trust v. Boyer (In re Bridgeport Holdings, Inc.)*,[185] the United States Bankruptcy Court for the District of Delaware issued a memorandum opinion in which it refused to dismiss breach of fiduciary duty claims against corporate directors who approved the sale of a financially distressed company's assets on the eve of bankruptcy. Specifically, the court said, "[T]he allegations support the claim that the D & O Defendants breached their fiduciary duty of loyalty and failed to act in good faith by *abdicating* crucial decision-making authority to [the restructuring advisor], and then failing adequately to monitor his execution."[186] Further, with respect to the business judgment rule, the court said that to invoke its protections "'directors have a duty to inform themselves, prior to making a business decision, of all material information reasonably available to them.'"[187] Particularly, if the legal scholarship which asserts that that the alleged tension between shareholders and creditors is irrelevant for purposes of maximizing a firm's long-run value is correct,[188] asset sensitive governance successfully harmonizes these two threads of fiduciary duties into a single approach.

b. *Invigorating Corporate Waste Doctrine*

The corporate waste doctrine, a doctrine that essentially lies fallow today, provides a circumvention of the application of the business judgment rule. Delaware courts define corporate waste as a director irrationally squandering corporate assets.[189] Also in *In re Walt Disney Co. Derivative Litigation*, the court stated that a finding of waste is appropriate in "unconscionable case[s] where directors irrationally squander or give away corporate assets."[190] "[A] transfer of corporate assets that serves no corporate purpose" might constitute waste.[191] Similarly, a transfer of corporate assets might constitute waste if "no consideration at all is received."[192]

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[185] 388 B.R. 548 (Bankr. D. Del. 2008).

[186] *Id.* at 565.

[187] *Id.* at 569 (quoting Cede & Co. v. Technicolor, Inc., 634 A.2d 345, 367 (Del. 1993)).

[188] *See* Valsan & Yahya, *supra* note 149, at 29-39.

[189] *In re* Walt Disney Co. Deriv. Litig., 907 A.2d 693, 748-49 (Del. Ch. 2005) (citing Brehm v. Eisner, 746 A.2d 244, 263 (Del. 2000) for a discussion on waste as a legal standard).

[190] *Id.* at 749 (internal quotation omitted).

[191] Brehm v. Eisner, 746 A.2d 244, 263 (Del. 2000) (quoting Lewis v. Vogelstein, 699 A.2d 327, 336 (Del. Ch. 1997)).

[192] *Id.*

To prove waste, the plaintiff must establish that an exchange was "so one sided that no business person of ordinary, sound judgment could conclude that the corporation has received adequate consideration."[193] In light of the difficulty of proving this standard, unsurprisingly Delaware courts rarely find that directors or officers committed corporate waste. While the business judgment rule requires care in the process of decision making, the waste doctrine examines due care through the substance of decisions made by officers and directors.[194] A claim of waste alleges that the consideration received by the company in a particular transaction is "so disproportionately small as to lie beyond the range at which any reasonable person might be willing to trade."[195] Because the Delaware Supreme Court has held that every act of waste constitutes bad faith, upon a finding of waste, neither the optional exculpatory provisions of Delaware law nor the business judgment rule would protect a director or officer from liability.[196] Stating the issue using the language of contract law, in instances where a problem of legally sufficient consideration exists for a corporate transfer of assets, regardless of the external impartiality of the decision making (or lack

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[193] *In re Walt Disney*, 907 A.2d at 748-49.

[194] *See Brehm*, 746 A.2d at 262-64 (suggesting that the business judgment rule requires "process due care" while the waste doctrine inquires into "substantive due care"); *see also* Lynn A. Stout, *In Praise of Procedure: An Economic and Behavioral Defense of* Smith v. Van Gorkom *and the Business Judgment Rule*, 96 NW. U. L. REV. 675, 675, 680 (2002) (expressing that in regard to the business judgment rule, judges are to consider only the quality of the board's decision making procedures).

[195] *Brehm*, 746 A.2d at 263 (quoting *Lewis*, 699 A.2d at 336). The courts have defined corporate waste as the misuse of corporate assets by majority shareholders. Under these circumstances, majority shareholders benefit at the expense of the corporation. *See, e.g.*, Banks v. Bryant, 497 So. 2d 460, 465 (Ala. 1986); Fin., Inv. & Rediscount Co. v. Wells, 409 So. 2d 1341, 1342-44 (Ala. 1981) (upholding jury award on claim of corporate waste where majority shareholder misused corporate assets and usurped corporate opportunities). A corporation has standing to assert such a claim because the injury to a minority shareholder is "incidental" and "indirect" while the injury to a corporation is direct. *See* Disctronics Ltd. v. Disc. Mfg., Inc., 686 So. 2d 1154, 1165 (Ala. 1996) (holding individual claim for misappropriation of corporate assets properly dismissed because "[o]nly through a derivative action can a stockholder seek redress for injury to the corporation in which he owns stock"), *overruled by* Prof'l Ins. Corp. v. Sutherland, 700 So. 2d 347 (Ala. 1997) (overruling *Disctronics* on grounds that the "'outbound' forum selection clauses are not per se void and may be enforced if reasonable under [the] circumstances"); Pegram v. Hebding, 667 So. 2d 696, 702 (Ala. 1995) (explaining that "[i]t is well settled that when individual damages sought to be recovered by a plaintiff are incidental to his or her status as a stockholder in a corporation, the claim is a derivative one and must be brought on behalf of the corporation"); *see also* Andrew P. Campbell & Caroline Smith Gidiere, *Shareholder Rights, the Tort of Oppression and Derivative Actions Revisited: A Time for Mature Development?*, 63 ALA. LAW. 315, 317 (2002) (explaining that corporate waste claims provide the clearest example of when the distinction between individual oppression claims and derivative actions is without a practical difference).

[196] *In re Walt Disney*, 907 A.2d at 749 (referring to White v. Panic, 783 A.2d 543, 553-55 (Del. 2001)).

thereof), a basis for a claim should in theory exist. This prohibition on asset transfers seeks to prevent unreasonable self-harm to the corporation,[197] even when the decision-making process appears unbiased.[198]

As such, this waste doctrine can be resuscitated for the protection of intangible assets. As the example of information security deficits illustrates, many companies' directors and officers are not vigilantly monitoring corporate information assets. Strengthening the waste doctrine offers one way of defending the corporation from mismanagement and a future of data "transfers" lacking consideration. It is true that information assets, much like mortgage backed securities or energy futures,[199] are a complicated and technically sophisticated subject area. Consequently, many officers and directors may incorrectly view information management to be the province of information technology specialists. And, but for the narrow exception carved out by the *Caremark* case, corporate law does not appear to require it of them. Unless and until a major transaction arrives where information assets are implicated, few incentives exist for them to take an interest. By then, however, as Part II explained,[200] the damage to these assets will be irreparable. Further, because of the transitive nature of information risk explained in Part II,[201] mismanagement of intangible assets, particularly information assets, harms not only the company, but also numerous outsiders who depend upon the company's integrity, and may think less of the company or sue.

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[197]Business ethicists might argue that irrationally risky corporate behavior is violative of a widely acknowledged "duty not to harm." In the context of multinationals' activity in other countries, Professor Donaldson has argued that specific universal moral constraints mandate that businesses abide by a duty to cause no harm, even in the absence of explicit legal requirements. Tom Donaldson, *Moral Minimums for Multinationals*, 3 ETHICS & INT'L AFFAIRS 163, 174-80 (1989).

[198]The hallmark of the business judgment rule is the discretion it affords to corporate decision makers. The corporate form is partly designed to promote economic risk. The argument in favor of providing wide latitude in decision making asserts that if courts were permitted more leeway to "second guess" the terms of corporate contracts, there would be a disincentive for officers and directors to approve risky transactions. Although calculated risk is frequently the key to innovation, it is unclear whether subsidizing unreasonably risky decision making, even if pursuant to appropriate process, is a net good.

[199]For the third time in this decade, a significant market overvaluation has shaken our economy. In examining these three instances—the internet bubble and market crash of 2000-2001, the Enron and Worldcom bankruptcies in 2001, and the mortgage backed securities crisis of 2008—a common characteristic emerges. In all three cases, the products at issue were complicated and technically sophisticated and were only well understood by a handful of experts.

[200]*See supra* Part II.B.2.

[201]*See supra* Part II.B.2.

c. *Supervised Management: Little Brother is Watching*

The role of the board of directors and officers changes under an asset sensitivity approach to governance. Competing views exist as to whether the shareholders or the board of directors should be viewed as possessing the ultimate decision-making authority for the corporation.[202] The strengthened fiduciary duties and corporate waste doctrine associated with asset sensitive governance gives shareholders the opportunity for more meaningful oversight of corporate activities, even assuming a reality of director primacy. The same technology forces pushing intangible assets into the corporate spotlight simultaneously enable greater degrees of shareholder empowerment.

The legal literature identifies three functions performed by boards of directors: disciplining top management, setting some managerial functions such as for policy, and providing access to networks of contacts.[203] One view asserts that the board of directors constitutes the primary governing force in a corporation, exerting "primacy" in control.[204] The nexus of contracts model and, in particular, the version of the director primacy model associated with this approach consider the corporation to be a type of legal nexus through which stakeholders enter into private contractual relationships, and that corporate production arises as a consequence of these contracts.[205] Shareholders do not own the corporation; they own a claim to profits and assets. Professors Michael Jensen and William Meckling, for example, consider shareholders to be principals who hire corporate officers and directors to act as their agents whose only job is to maximize shareholder wealth.[206] These scholars believe that while shareholder profit maximization is the goal of the enterprise, shareholder participation in governance should be limited due to the heterogeneity of shareholder interests and a lack of interest by many shareholders in the daily workings of the corporation.[207] The ability to elect the board of directors constitutes the

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[202]For a discussion of the competing views of director or shareholders as the ultimate corporate decision maker, see Harry G. Hutchinson, *Director Primacy and Corporate Governance: Shareholder Voting Rights Captured by the Accountability/Authority Paradigm*, 36 LOY. U. CHI. L.J. 1111, 1112-28 (2005).

[203]Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547, 599 (2003).

[204]"Corporate governance is best characterized as based on 'director primacy.'" Larry E. Ribstein, *Why Corporations?*, 1 BERKELEY BUS. L.J. 183, 196 (2004).

[205]*See* BAINBRIDGE *supra* note 112, at 199-201, 203-04; EASTERBROOK & FISCHEL, *supra* note 112, at 12, 90-93.

[206]Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure*, 3 J. FIN. ECON. 305 (1976).

[207]*See* Stephen M. Bainbridge, *The Case for Limited Shareholder Voting Rights*, 53 UCLA

extent of desirable shareholder participation, apart from the ability to exit through selling shares. Therefore the board of directors serves as a form of "Platonic guardian" that derives its legitimacy from being the contractual hub of the nexus of contracts.[208] As such, the current structure of corporations demonstrates a regime of "director primacy."[209] According to Professor Stephen Bainbridge, director primacy is both the staus quo and the only efficient mechanism for corporate decision making. He asserts that:

> The collective action problems inherent in attempting to involve many thousands of decision makers necessarily impede shareholders from operating the corporation by consensus. Put another way, authority-based decision-making structures are desirable in large corporations because of the potential for division and specialization of labor. Bounded rationality and complexity, as well as the practical costs of losing time when one shifts jobs, make it efficient for corporate constituents to specialize. Directors and managers specialize in the efficient coordination of other specialists. In order to reap the benefits of specialization, all other corporate constituents should prefer to specialize in functions unrelated to decision making, such as risk-bearing (shareholders) or labor (employees), delegating decision making to the board and senior management.[210]

Other scholars, however, argue for considering empowered shareholder participation to a greater degree, partially to curb abuses by officers and directors.[211] Shareholder primacy theorists argue that shareholders are the owners of the corporation and, as such, hold ultimate governance authority. Professor Lucien Bebchuk, for example, argues in favor of more meaningfully empowering shareholder participation and has articulated proposals for improving the ability of shareholders to participate in elections

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L. REV. 601, 607 (2006) (explaining heterogeneity of shareholder interests).

[208]Bainbridge, *supra* note 203, at 560 (describing the board of directors as the nexus of contracts).

[209]*See id.* at 547-48 (discussing the contractarian model).

[210]Stephen M. Bainbridge, *Director Primacy and Shareholder Disempowerment* 20 (Univ. of Cal., L.A. Law & Econ. Research Paper Series, Research Paper No. 5-25, 2006), *available at* http://ssrn.com/abstract=808584. For the published version of Professor Bainbridge's comments, see Stephen M. Bainbridge, *Director Primacy and Shareholder Disempowerment*, 119 HARV. L. REV. 1735, 1746 n.56 (2006).

[211]As the dramatic market downturns of the last several years demonstrate, our current governance structures are suboptimal. Greater oversight of corporate operations may eliminate a portion of market instability.

and to more easily remove boards of directors.[212] But perhaps more importantly, Bebchuk's work demonstrates the importance of generating more aggressive mechanisms of director and officer supervision. Bebchuk highlights the role of officers, in particular, in corporate governance and argues in favor of additional transparency in executive compensation and other internal corporate decision making.[213]

Professor Lynn Stout has critiqued these calls for greater shareholder participation through asserting that directors, apart from possessing unique expertise, protect shareholders from each other and their whims.[214] She argues that shareholders are but one of a number of groups who make illiquid, firm specific investments in the company, which then renders them easily exploitable. Shareholders would be tempted to opportunistically "hold up" other members of the corporate "team."[215] She argues in favor of director primacy as an efficient tool of governance.[216]

Even if we assume *arguendo* that director primacy accurately reflects the state of affairs of corporate governance today, this does not mean that its current incarnation is optimal. The very same technology forces that have allowed corporations to build their intangible assets can facilitate a higher level of shareholder participation than the level that currently exists. Technology has significantly mitigated a portion of information symmetries across corporate stakeholders. Securities filings are all available on the internet, and many companies have investor relations portions of websites. Press releases are available online, either through the corporation or otherwise. Ample discussion of corporate strategy, projects, and foibles is also available through unofficial internet channels such as news websites, blogs, websites, message boards, chatrooms, and various financial data aggregation and analysis sites.[217] In meaningful ways, technology has empowered share-

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[212] *See generally* Lucian A. Bebchuk, *The Myth of the Shareholder Franchise*, 93 VA. L. REV. 675 (2007) (discussing shareholder participation).

[213] Lucian A. Bebchuk, *Investors Must Have Power, Not Just Figures on Pay*, FIN. TIMES (London), July 28, 2006, at 13. (explaining the changes necessary to shareholder participation).

[214] *See* Lynn A. Stout, *The Mythical Benefits of Shareholder Control*, 93 VA. L.REV. 789, 794 (2007) (discussing how directors protect shareholders from each other).

[215] *Id.* at 795-96.

[216] *See generally id.* (arguing in favor of director primacy). Goodwill and long-term profits can also be damaged through overzealous corporate information control. For example, Hewlett Packard faced suits arising out of the corporation's hiring of private investigators to obtain nonpublic information about its directors. *See* Leslie Katz, *Calif. Court Drops Charges Against Dunn*, CNET NEWS, Mar. 14, 2007, http://news.cnet.com/Calif.-court-drops-charges-against-Dunn/2100-1014_3-6167187.html?tag=txt.

[217] *See, e.g.*, The Marketing Technology Blog, http://www.marketingblog.com/2007/03/13/corporate-blogging-strategies (last visited June 10, 2009) (discussing the benefit of having a corporate blog); *see also* Daniel Adam Birnhak, *Online Shareholder Meetings: Corporate Law

holders with better access to information and a more meaningful ability to supervise board of director decisions. Shareholders who want to be more involved in the life of the corporation can now better harness adequate information to do so.

Director and officer oversight is comparatively very weak when reviewed in context of other "high trust" professions[218] such as medicine and law. Improving shareholder "voice" and oversight in corporate governance is a laudable goal. Voice and oversight can be strengthened through an asset sensitive governance approach using two primary mechanisms: shareholder proposals and, as a consequence of strengthened fiduciary duties and corporate waste doctrine, the heightened possibility of shareholder derivative suits. Therefore, shareholders (and their attorneys) are more likely to invest time in oversight.

1. Shareholder Proposals and Other Involvement

Securities and Exchange Commission (SEC) Rule 14a-8 grants shareholders the right to include proposals in a company's proxy materials.[219] The shareholder proposal rule offers shareholders a vehicle for expressing their views to management and other shareholders. For example, if a company experiences a devastating data breach that materially diminishes the value of its information assets and goodwill, shareholders can immediately generate a proposal instructing officers and directors to exercise greater care in security. Such proposals may play an important signaling role, alerting the corporation to the types of issues that shareholders find important for the corporation to consider.[220]

Anomalies or the Future of Governance?, 29 RUTGERS COMPUTER & TECH. L.J. 423 (2003) (discussing the rise of internet shareholder conferences).

[218]Looking to other areas of commerce, the law regularly imposes oversight, licensing, and education requirements on professions. For example, if a lawyer does not know the law and loses a case because of it, it is considered malpractice. If a lawyer fails to complete continuing education requirements, her license will not be renewed. It is reasonable to impose an obligation on officers and directors to educate themselves to achieve a minimal level of knowledge on matters of corporate operations and to stay abreast of major problems facing the business community and oversee that they have been addressed internally. For example, to be a cosmetologist in the state of New York, a candidate is required to undertake 1000 hours of study. N.Y. COMP. CODES R. & REGS. tit. 19, § 162.4 (2009). To be a board member at Fortune 500 companies, on the other hand, no explicit educational or knowledge requirements are present. *See, e.g.*, Dell, Board of Directors, http://www.dell.com/content/topics/global.aspx/corp/directors/us/en/nominate?c=us&l=en&s=corp&~section=000 (last visited Mar. 9, 2009) (listing director qualifications).

[219]17 C.F.R. § 240.14a-8 (2008).

[220]For example, one investor group is actively introducing proposals to discourage investments that contribute to genocide. *See generally* Investors Against Genocide, Shareholder Proposals, http://investorsagainstgenocide.net/shareholderresolutions (last visited Apr. 1, 2009) (arguing

And when faced with an unsatisfactory response to the shareholder proposal, aggressive efforts to exclude the proposal,[221] or, in severe cases where time is of the essence, shareholders can make demand on the board to explain the corporation's information security plan and the reason for the loss of the assets in question. Unsatisfactory response to the shareholder demand then paves the way for a shareholder derivative suit.[222] Satisfactory response demonstrates care in management and can, perhaps, prevent shareholders from selling shares out of anger and begin to rebuild trust. This type of proposal and demand mechanism facilitated by the asset sensitivity approach offers a shareholder check and balance on director and officer power. Officers and directors would likely consider themselves more aggressively monitored under this type of regime. The officers and directors would know that "little brother" may be watching.

Although derivative suits are a useful tool, improving shareholder voice under an asset sensitivity approach to governance does not necessarily need to involve derivative suits. The exosystemic influences on the corporation, such as technology innovation, can be leveraged to give shareholders more participatory voices. Shareholders can be harnessed as a source of corporate knowledge creation. It is undeniable that a small number of shareholders will likely possess unique expertise to identify specific areas of corporate mismanagement—expertise beyond that possessed by members of the board of directors and officers. Through creating technology-based channels for reporting potential corporate mismanagement, corporations can capture this expertise.

Directors and officers should welcome these shareholder insights. For example, it is common that information security experts regularly notice which corporate websites are particularly vulnerable to certain types of exploits. If left unaddressed, these types of problems will likely lead to a loss of information assets. As discussed in Part II, it is also common that corporate officers lack basic knowledge regarding matters of information security, and sometimes serious security problems go unaddressed for months, if not years.[223] If an expert is a shareholder in the corporation, the company would benefit from this expert's knowledge, and, as a shareholder, the expert has financial incentive to help the company.[224] Creating channels

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that mutual funds should not make investments that contribute to genocide).

[221] Lisa Fairfax, *Shareholder Proposals and Communication*, CONGLOMERATE, Apr. 21, 2009, http://www.theconglomerate.org/2009/04/shareholder-proposals-and-communication.html.

[222] *See generally* DEBORAH A. DEMOTT, SHAREHOLDER DERIVATIVE ACTIONS LAW AND PRACTICE §§ 1:1-1:2 (2003) (describing the procedural hurdles necessary to navigate in order to properly bring a derivative suit).

[223] *See supra* Part II.B.2.

[224] This statement assumes that the shareholder is not primarily interested in making money

for shareholder communications of this sort can only benefit the company: on the one hand, it will assist officers and directors in fixing unconscious mismanagement. On the other hand, in the case of conscious mismanagement, it can help set up a stronger basis for a derivative suit to prevent incompetent directors and officers from further damaging corporate assets.

2. Shareholder Derivative Suits

The first step in a shareholder derivative suit involves a demand on the board of directors by the shareholder, asking the board to file suit to seek redress for corporate harms.[225] As a practical matter, the board should view this demand as a warning; shareholders are seeking an explanation of the rationale behind a particular corporate decision or omission which is alleged to have harmed the corporation.[226] Strengthened fiduciary duties are likely to increase demands on the board. In turn, the board will be more conscious of its role and responsibilities to the corporation. They would be deterred from taking actions likely to cause harm to corporate assets and would more aggressively craft policy regarding day-to-day management of the corporation with the officers. Facilitating shareholder demands on the board for greater information and transparency does not increase involvement of all shareholders, but it provides an opportunity for self-selected shareholders to have a stronger feedback loop to the board and officers about mistakes in progress. Ultimately, any proceeds of a successful shareholder derivative action would be awarded to the corporation itself and not to the individual shareholders that initiate the action.

Though the increased likelihood of suit may seem draconian or daunting, in reality minimal corporate disruption would happen. Practically speaking, a highly developed insurance market already exists to cover officers' and directors' errors. Empowering shareholders to more easily "second-guess" officers and directors on unreasonable actions, such as failing to implement adequate information control processes, can only lead to better disclosure and more careful decision making on the part of officers and directors—i.e., more stable development of the corporation.

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at the expense of the corporation's mismanagement by, for example, shorting the stock.

[225] *See generally* Ritter v. Dollens (*In re* Guidant S'holders Deriv. Litig.), 841 N.E.2d 571, 574 (Ind. 2006) (noting universal demand statutes nationwide).

[226] *Id.*

IV. CONCLUSION

This article proposes strengthening existing corporate governance paradigms with an approach of asset sensitivity in governance. Asset sensitivity highlights the importance of intangible assets and their relational nature. Further, the corporation cannot be analyzed devoid of its social context. It develops across time within several layers of social context. However, it should develop with a focus on long-term welfare and its shareholders' long-term profit maximization, not simply in pursuit of short-term shareholder profit maximization. Corporations are increasingly reliant on intangible assets and require ongoing officer and director oversight, not merely oversight of extraordinary transactions. Fiduciary duties of good faith and care should evolve to harmonize omissions and commissions by officers and directors. Similarly, corporate waste doctrine, which is little used by courts, can be reinvigorated to act as a deterrent against director and officer mismanagement. Using developmental psychology theory as its starting point, asset sensitive governance considers corporate learning and development across time. It also enables more meaningful oversight by shareholders of corporate decision.